Evaluatie van de impact van endocrien verstorende stoffen op het Noordzee-ecosysteem

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Eindverslag Juni 2001

Opdrachtgever: DWTC

DIENSTEN VAN DE EERSTE MINISTER
Federale diensten voor wetenschappelijke, technische en culturele aangelegenheden

ED-North: «DUURZAAM BEHEER VAN DE NOORDZEE»

PLAN VOOR WETENSCHAPPELIJKE ONDERSTEUNING VAN EEN BELEID
GERICHT OP DUURZAME ONTWIKKELING

CONTRACTNR. MN/02/83
CONTRACTNR. MN/02/84

EINDRAPPORT
Juni 2001

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INHOUDSOPGAVE

1 SAMENVATTING

Er is een toenemende bezorgdheid over bepaalde antropogene chemicaliën, hormoonverstoorders, welke de natuurlijke werking van hormonen kunnen beïnvloeden. In tegenstelling tot de hoeveelheid informatie voor zoetwater-ecosystemen, is relatief weinig data beschikbaar i.v.m. de mogelijke effecten van potentieel hormoonverstorende stoffen in het marien milieu. Aangezien de zee de uiteindelijke 'sink' is voor vele (persistente) polluenten, wordt verondersteld dat deze chemicaliën ook een effect hebben op mariene organismen.

In België staat het onderzoek naar endocriene verstoring in het milieu in het algemeen nog in zijn kinderschoenen. Bovendien bestaat er, op wereldvlak, nog steeds geen eenduidige formulering van het begrip endocriene verstoring en zijn nog steeds geen gestandaardiseerde testen voor de evaluatie van de endocrien verstorende activiteit van chemische stoffen beschikbaar. Dit project maakt een kritische synthese van de toenemende hoeveelheid wetenschappelijke literatuur over de problematiek van de endocriene verstoring. Hiervoor werden verschillende databases doorzocht en werden experten en organisaties uit binnen- en buitenland geraadpleegd. Op basis van deze literatuur werd een wetenschappelijk gefundeerde lijst en electronische databank ontwikkeld van 765 chemische stoffen die een (potentieel) endocrien verstorende activiteit bezitten. Deze relationele databank bevat informatie inzake het hormoonverstorend potentieel, inclusief effectbeoordeling en fysico-chemische eigenschappen van de desbetreffende chemische stoffen.

Een prioritering werd uitgevoerd voor die stoffen waarvoor voldoende informatie beschikbaar is omtrent de milieuconcentraties in de Noordzee, hun bronnen en de endocriene effecten die zij veroorzaken. Op basis van deze blootstelling –en effectdata werden de geïdentificeerde stoffen onderverdeeld in 3 groepen: prioritaire stoffen (± 1%), mogelijks relevante stoffen (± 4%) en stoffen met ongekende relevantie (± 95%). Tenslotte werden uitgaande van deze resultaten verdere onderzoeksnoden en beleidsmaatregelen geformuleerd.

Op basis van de beschikbare informatie is het duidelijk dat er momenteel veel te weinig gekend is m.b.t. blootstelling aan en effecten van hormoonverstorende stoffen in het marien milieu van het Belgisch Continentaal Plat en het Schelde-estuarium om een wetenschappelijk verantwoorde risico-analyse uit te voeren. Bijgevolg is het voorbarig om op dit moment reductie- en/of saneringsmaatregelen voor te stellen. De beleidsmaatregelen dienen in eerste instantie gericht te zijn op het uitbreiden van de kennis inzake blootstelling en effecten bij mariene organismen zodat risico-evaluatie mogelijk wordt.

Teneinde de geformuleerde onderzoeksnoden af te stemmen in functie van de

tekorten aan innoverende initiatieven of expertise op de verschillende onderzoeksvlakken, dienen zij in het kaderwerk van bestaande kennis en expertise in België geplaatst te worden. Hiertoe werd een lijst van experten opgesteld en een overzicht van hun belangrijkste referenties gegeven. Eveneens wordt een overzicht gegeven van de internationale contacten op het vlak van endocriene verstoring. Op basis van de beschikbare expertise kan België zich in een trekkersrol profileren m.b.t. onderzoek naar endocrien verstorende effecten. Dit kan zich enerzijds vertalen in een sterkere participatie in internationale fora en anderzijds kunnen nationale thematische netwerken opgericht worden. Vanzelfsprekend dient het onderzoek afgestemd te worden op de activiteiten die binnen internationale fora aan de gang zijn teneinde overlapping te vermijden en integratie te bevorderen.

2 INLEIDING

De problematiek van de endocriene verstoring is een onderzoeksdomein binnen de ecotoxicologie dat de laatste jaren steeds meer aandacht opeist. Er is een toenemende bezorgdheid i.v.m. bepaalde antropogene chemicaliën welke de natuurlijke werking van hormonen kunnen beïnvloeden (Gillesby en Zacharewski,1998). De regulatie en de werking van hormonen zijn uiterst precieze processen om de homeostase binnen een organisme te handhaven en een verstoring in het natuurlijk evenwicht van deze hormonen kan derhalve zeer ernstige gevolgen hebben. In 1962 werd door Rachel Carson gepleit voor meer onderzoek naar en een verminderd gebruik van bepaalde persistente stoffen (o.a. DDT). Het was echter na de publicatie van ‘Our stolen future’ door Theo Colborn in 1996 dat plots een massale belangstelling ontstond voor de problematiek van de endocriene verstoring.

In laboratoriumstudies met zoogdieren, vissen, reptielen, amfibieën, vogels en invertebraten is endocriene verstoring na blootstelling aan verschillende antropogene en natuurlijke chemicaliën reeds meermaals aangetoond (Ankley et al., 1998). Veel belangrijker zijn echter de voorbeelden van endocriene verstoring welke zich in de natuur voordeden: vervrouwelijking van alligators in het Apopka Meer in Florida (Guillette et al., 1994), vervrouwelijking van meeuwen (Fry en Toone, 1981), reproductieve problemen bij panters in Florida (Facemire et al., 1995), ontwikkelingsstoornissen bij schildpadden in de Grote Meren (Bishop et al., 1991), imposeks- en interseksfenomenen bij mariene gastropode mollusken (Bryan et al., 1986; Gibbs et al., 1991; Matthiessen en Gibbs, 1998), vervrouwelijking van vissen in de buurt van papierfabrieken (Tremblay en Van Der Kraak, 1999), …

Bij de mens zijn een verminderde spermakwaliteit (Auger et al., 1995; Carlsen et al., 1992; Comhaire et al., 1996; Irvine et al., 1996; Pajarinen et al., 1997; Skakkebaek en Giwercman, 1992; Van Waeleghem et al., 1996), een verhoogd voorkomen van borst- en teelbalkanker (Davis et al., 1993) en een algemeen

verminderde mannelijke reproductieve capaciteit (Jensen et al., 1995) waargenomen. Het meest (eerst) beschreven voorbeeld van effecten bij de mens als gevolg van endocriene verstoring na blootstelling aan een antropogene stof zijn ernstige afwijkingen van het geslachtsstelsel bij kinderen, waarvan de moeder tijdens de zwangerschap behandeld was met het synthetische oestrogeen diethylstilbestrol (DES) ter voorkoming van een spontane abortus. Dochters van 'DES-moeders' vertoonden een hogere frequentie van reproductieproblemen, kankers aan vagina en cervix en misvormingen van de geslachtsorganen (uterus, cervix) (Nollar et al., 1990). 'DES-zonen' vertoonden een verhoogd voorkomen van teelbalkanker, cryptorchidisme, misvormingen van de genitaliën en ernstige oligozoöspermie (Gill et al., 1976).

In tegenstelling tot de hoeveelheid informatie voor zoetwater-ecosystemen, is relatief weinig data beschikbaar i.v.m. de mogelijke effecten van potentieel hormoonverstorende stoffen in het marien milieu. Aangezien de zee de uiteindelijke 'sink' is voor vele (persistente) polluenten, wordt verondersteld dat deze chemicaliën ook een effect hebben op mariene organismen.

In België staat het onderzoek naar endocriene verstoring in het milieu in het algemeen nog in zijn kinderschoenen. Bovendien bestaat er, op wereldvlak, nog steeds geen eenduidige formulering van het begrip endocriene verstoring en zijn nog steeds geen gestandaardiseerde testen voor de evaluatie van de endocrien verstorende activiteit van chemische stoffen beschikbaar. Dit project maakt een kritische synthese van de toenemende hoeveelheid wetenschappelijke literatuur over de problematiek van de endocriene verstoring.

3 DOELSTELLING

Dit project heeft tot doel een kritische synthese te maken van de toenemende hoeveelheid wetenschappelijke literatuur over de problematiek van de endocriene verstoring. Op basis van beschikbare wetenschappelijke literatuur wordt een wetenschappelijk gefundeerde lijst en electronische databank van chemische stoffen die een (potentieel) endocrien verstorende activiteit bezitten ontwikkeld. In een eerste fase zal alle informatie inzake endocriene verstoring, inclusief effectbeoordeling en fysico-chemische eigenschappen van de desbetreffende chemische stoffen, worden verzameld in relationele databanken. Vervolgens wordt een overzicht gemaakt van de effecten van deze stoffen op het endocrien metabolisme van mariene organismen en een voorlopige prioritering uitgevoerd voor die stoffen waarvoor voldoende informatie beschikbaar is omtrent de milieuconcentraties in de Noordzee, hun bronnen en de endocriene effecten die zij veroorzaken. Tenslotte zullen uitgaande van deze resultaten verdere onderzoeksnoden en beleidsmaatregelen geformuleerd worden.

Het publiceren van een wetenschappelijk overzicht en het formuleren van

voorstellen voor beleidsmaatregelen zullen essentiële hulpmiddelen zijn bij de voorbereiding van overheidsmaatregelen m.b.t. de ontwikkeling van actieplannen i.v.m. endocrien verstorende stoffen in het marien milieu.

4 MATERIAAL EN METHODEN

Om een zo ruim mogelijk beeld te krijgen van de beschikbare literatuur over endocriene verstoring in het milieu werd een zeer uitgebreide literatuur screening uitgevoerd. Hiervoor werden verschillende databases doorzocht en werden experten en organisaties uit binnen- en buitenland geraadpleegd.

4.1 Databanken

Poltox 1: Poltox 1 is een bibliografische database met referenties over milieuverontreiniging en toxicologie m.b.t. schadelijke effecten van toxicanten en milieuverontreiniging op planten, dieren en mens. De database omvat data uit drie verschillende bronnen: een deel van de National Library of Medecine's **Toxline (TOX) database**, Cambridge **Scientific Abstracts (CSA) journals** en een deel van the International Food Information Service's **Food Science and Technology Abstracts (FSTA)**.

Medline: Medline is de database van de National Library of Medicine en omvat onderwerpen als microbiologie, gezondheidszorg, voedingsleer, farmacologie en milieuzorg voor zover deze gerelateerd zijn aan geneeskunde.

Current Contents: Current Contents is een algemene database met referenties van meer dan 7000 tijdschriften en boeken die informatie over vele disciplines omvat.

CAB Abstracts: De CAB Abstracts database omvat de landbouwkundige wetenschappen in de meest algemene betekenis. Onderwerpen zijn o.a. biotechnologie, milieudegradatie en remediatie, diergeneeskunde, herbiciden, genetica,…

Biological Abstracts: Biological Abstracts bevat referenties over de biologische en biomedische wetenschappen.

Agris: Agris (the International System for the Agricultural Sciences and Technology) is een internationale database gericht op o.a. landbouwkundige wetenschappen en voedingsleer.

Agricola: Agricola (Agricultural Online Access) bevat referenties over landbouwkundige wetenschappen, biologie, biotechnologie, ecologie, e.a. samengesteld door de National Agricultural Library (NAL), het Food and Nutrition Information Center (FNIC), de American Agricultural Economics

Documentation Center (AAEDC) en een aantal andere instituten actief op het vlak van landbouwkundige en verwante wetenschappen.

The Web of Science: De Universiteit Gent heeft een licentie verkregen van het Institute for Scientific Information (ISI) om gebruik te mogen maken van The Web of Science. The Web of Science verschaft op een 'internet-analoge' (*http://websci.rug.ac.be/*) manier toegang tot Science Citation Index Expanded, Social Science Citation Index en Arts & Humanities Citation Index en omvat alle mogelijke wetenschappelijk relevante onderwerpen.

Oxford Journals: *http://www3.oup.co.uk/journals*

4.2 Instituten en organisaties

United States Environmental Protection Agency (USEPA):
http://www.epa.gov/endocrine; *http://www.epa.gov/scipoly/oscpendo/* en *http://www.epa.gov/scipoly/oscpendo/history*

The Center for Bioenvironmental Research at Tulane and Xavier Universities (CBR): *http://www.cbr.tulane.edu* met speciaal aandacht voor Environmental estrogens and other hormones (EEOH) web site: *http://www.som.tulane.edu/ecme/eehome*

Organisation for Economic Co-operation and Development (OECD):
http://www.oecd.org/ehs/endocrin.htm

World Wildlife Fund Canada (WWF Canada):
http://www.wwfcanada.org/hormone-disruptors/index.html

Institute for Environment and Health (IEH): *http://www.le.ac.uk/*

National Institute of Environmental Health Sciences (NIEHS) (Research on Environmental-Related Disease): *http://www.niehs.nih.gov/*.

National Institute of Health Sciences (NIHS):
http://www.nihs.go.jp/index.html, met speciale aandacht voor de pagina's *http://www.nihs.go.jp/hse/environ/endocrin.html*

The European Commission: *http://europa.eu.int/comm*

The European Chemical Industry homepage (CEFIC): *http://www.cefic.org*

Air & Waste Management Association: *http://awma.org*

The EXtension TOXicology NETwork (EXTOXNET):
http://www.ace.orst.edu/info/extoxnet

Instant Reference Source, Inc.: *http://www.instantref.com/inst-ref.htm*

Introduction to hormone disrupting chemicals:
http://website.lineone.net/~mwarhurst/index.html

5 DE PROBLEMATIEK VAN DE ENDOCRIENE VERSTORING

5.1 Summier overzicht van de ecologische effecten van endocrien verstoring

Reproductieve verstoringen bij mens en dier in hun natuurlijke ecosystemen zijn reeds meermaals beschreven maar in weinige studies is een causaal verband met endocriene verstoring als gevolg van blootstelling aan chemicaliën aangetoond. Taylor en Harrison (1999) hebben recent een overzicht gepubliceerd van endocriene verstoring in het milieu. Een zeer gedetailleerd overzicht is onlangs gepubliceerd door het 'Institute for Environment and Health' (IEH, 1999). In deze paragraaf zal een algemeen overzicht gegeven worden van effecten van endocriene verstoring in het milieu. In de volgende sectie worden beschreven effecten in België en Nederland besproken.

5.1.1 Mens

Uiteraard is het zeer moeilijk om oorzaak-gevolg relaties van endocriene verstoring bij de mens te postuleren wegens de complexiteit van dit probleem en het feit dat deze problematiek slechts de laatste jaren intensief onderzocht is geworden. Toch kunnen een aantal waargenomen effecten toegeschreven worden aan de (mogelijke) blootstelling aan endocrien verstorende stoffen. Het toegenomen voorkomen van borst- en testiscarcinoom, kankers aan de interne genitaliën (uterus, cervix), cryptorchidie, hypospadias en een verminderde spermakwaliteit worden toegeschreven aan blootstellingen aan endocrien verstorende stoffen (Auger et al., 1995; Carlsen et al., 1992; Comhaire et al., 1996; Davis et al., 1993; Gill et al., 1976; Irvine et al., 1996; Nollar et al., 1990; Pajarinen et al., 1997; Sakkebaek en Giwercman, 1992; Van Waeleghem et al., 1996). Bovendien staven lokale verschillen in de achteruitgang van de spermakwaliteit de hypothese dat milieufactoren een cruciale rol spelen in deze trend (Bujan et al., 1996; Fish et al., 1996). Er dient hierbij opgemerkt te worden dat een daling van de mannelijke fertiliteit een multi-factorieel verschijnsel is waarbij andere factoren dan de endocrien verstorende stoffen een invloed kunnen hebben (Dhooge, 1999).

De best gekende effecten bij de mens zijn de hoger beschreven effecten van DES op nakomelingen van vrouwen die tijdens hun zwangerschap behandeld werden met DES ter voorkoming van een miskraam. DES en andere endocrien verstorende stoffen kunnen niet door de placenta gemetaboliseerd worden en komen in de bloedcirculatie van de foetus terecht waar ze irreversibele schade kunnen veroorzaken aan het zich ontwikkelende leven.

In de context van de dioxine (en/of PCB) crisis in België bestaan enkele precedenten die de gevolgen van deze stoffen op de volgende generatie(s) kunnen laten vermoeden. In 1979 werd in Japan en Taiwan rijstolie accidenteel verontreinigd met grote hoeveelheden PCB's (het Yusho-incident). Het aantal miskramen nam toe en jongetjes, geboren na deze milieuramp, blijken op 11 jarige leeftijd gemiddeld een kleinere penis te hebben dan een controlegroep (van Kasteren, 1996). In 1976 kwamen in Seveso (Italië) grote hoeveelheden 2,3,7,8-tetrachlorodibenzo-p-dioxine (TCDD) in het milieu terecht. In de periode tussen april 1977 en december 1984 bleek de seksratio verstoord met significant meer vrouwelijke nakomelingen in de testpopulatie. Gezinnen waarvan beide ouders aan hoge doses werden blootgesteld kregen enkel dochters (Mocarelli et al., 1996).

Silvestroni en Palleschi (1999) toonden de inhibitie aan van de cytologische respons van spermatozoa op progesteron, nodig voor de initiatie van de acrosoomreactie, door het organochloorpesticide lindaan. De maximum inhibitie gebeurde bij een concentratie die noch een toename van de Ca^{2+}-influx, noch een depolarisatie van de membraan in de spermatozoa veroorzaakte (Silvestroni et al., 1997). Bovendien inhibeerde lindaan de gevoeligheid van het sperma voor progesteron bij doses die gevonden werden in de cervicale mucus van vrouwen met een onverklaarde infertiliteit (Wagner et al., 1990). Deze resultaten suggereren dat naast de schadelijke effecten van endocrien verstorende stoffen op zowel het mannelijk als het vrouwelijk reproductiestelsel, een ander effect, onafhankelijk van de reproductieve gezondheid, kan optreden. Bepaalde endocrien verstorende stoffen zouden infertiliteit kunnen veroorzaken bij lage, op het eerst zicht ongevaarlijke concentraties door interferentie met de acrosoomreactie. Dit is een verschijnsel waaraan in de toekomst zeker meer aandacht moet besteed worden.

5.1.2 Andere zoogdieren

Vermindering in populatie en verstoorde reproductie als gevolg van endocrien verstorende stoffen in het milieu zijn beschreven bij de Florida panter (*Felis concolor coryi*) (Facemire et al., 1995), de grijze zeehond (*Halichoerus grypus*), de ringelrob (*Phoca hispicla botnica*) (Bergman en Olsson, 1985; Jensen en Jansson, 1979), de gewone zeehond (*Phoca vitulina*) (Reijnders, 1986) en de beluga (*Delphinapterus leucas*) (De Guise et al., 1995). Een daling van de populatiegroei van de Europese otter (*Lutra lutra*) in Groot-Brittannië wordt geassocieerd met een verhoogde concentratie aan PCB's in weefsels (Mason, 1995).

De meest bestudeerde verschijnselen van endocriene verstoring bij zoogdieren zijn de effecten bij zeehonden. Tussen 1950 en 1975 was er een drastische daling van de zeehondenpopulatie in de Baltische Zee en het westelijk gedeelte van de Waddenzee. Deze gebieden waren (zijn) sterk vervuild met vooral organochloorverbindingen zoals DDT (en metabolieten) en PCB's (Jensen en

Jansson, 1979; Reijnders, 1986). Bovendien toonden Jensen en Jansson (1979) een correlatie aan tussen weefselconcentraties van DDT en PCB's en reproductieproblemen.

Nertsen (*Mustela vison*) die een mengsel van PCB's in hun dieet gevoederd kregen, vertoonden bij een dagelijkse dosis van 2-2,5 mg/kg Aroclor 1254 of Clophen A40 significante reproductieve verstoringen (prenatale sterfte). Bovendien werd een daling van de progesteronspiegel in het plasma na blootstelling aan Aroclor 1254 vastgesteld (Aulerich et al., 1985; Bäcklin en Bergman, 1992). Lund et al. (1999) toonden de inductie van leverenzymen, een verhoogd catabolisme van progesteron (*in vitro*) en een daling in thyroïdhormoonspiegel aan, na chronische blootstelling via het voedsel aan milieurelevante concentraties van methylsulfonmetabolieten van PCB's en DDE. De biologische en voornamelijk ecologische effecten van deze fenomenen moeten echter nog verder onderzocht worden.

5.1.3 Vogels

Tijdens de jaren '50 en '60 werd wereldwijd een daling van de populatiegrootte waargenomen van verschillende roofvogelsoorten. Dit bleek een gevolg te zijn van een verdunning van de eischaal door blootstelling aan organochloorpesticiden zoals DDT, aldrin, dieldrin en heptachlor (Peakall, 1994; Walker et al., 1996). Er wordt verondersteld dat het calciumtransport door de eischaalmucosaklier verstoord wordt door inhibitie van de binding van progesteron op zijn receptor. Lundholm (1988) toonde (*in vitro*) een dergelijke DDE-dosis afhankelijke inhibitie aan. Verstoorde reproductie (o.a. verdunning van de eischaal en embryosterfte) is eveneens waargenomen bij visetende vogelsoorten nabij de Grote Meren (USA) (Bowerman et al., 1995; Fry, 1995; Walker et al., 1996). Een multi-generatie studie met de Amerikaanse torenvalk (*Falco sparverius*) blootgesteld aan o,p'-dicofol toonde eischaalverdunning, embryosterfte en vervrouwelijking van embryo's aan in de eerste en tweede generatie nakomelingen (MacLellan et al., 1996).

Bij de meeuwenkolonies nabij het Ontario en Michigan Meer werd een verhoogd voorkomen van vrouwelijke koppels waargenomen. De eieren van deze kolonies bevatten hoge concentraties DDE en PCB's (Fox, 1992). Dergelijk lesbisch gedrag is een gevolg van een verschuiving van de seksratio naar meer vrouwelijke individuen. Fry en Toone (1981) toonden een vervrouwelijking aan van meeuwen blootgesteld aan milieurelevante DDT- en DDE-concentraties, maar het is niet volledig duidelijk of de vervrouwelijking de (enige) oorzaak is voor het te kort aan mannelijk soortgenoten in de broedkolonies.

5.1.4 Reptielen

Eén van de meest duidelijke voorbeelden van endocriene verstoring in het

milieu zijn effecten op de alligatorpopulatie in het Apopka Meer in Florida. Het Apopka Meer is sterk vervuild als gevolg van run-off van landbouwactiviteiten, rioolefluenten en een accidentele lozing van het organochloorpesticide dicofol en zwavelzuur in 1980. Het dicofol was bovendien gecontamineerd met DDT en zijn metabolieten DDD, DDE en chloro-DDT. De gevolgen van deze vervuilingen zijn intensief bestudeerd door Guillette en medewerkers (Guillette en Crain, 1996; Guillette et al., 1994).

Alligatoreieren van het Apopka Meer bevatten hoge concentraties aan p,p'-DDE, p,p'-DDD, dieldrin en cis-chlordaan. Juveniele alligators vertoonden misvormingen van de gonaden en abnormale seksteroïdspiegels in het plasma. Mannelijke dieren hadden slecht ontwikkelde testes, een kleinere penis, sterk verlaagde testosteronspiegels en een verhoogd 17β-oestradiol gehalte in het plasma. Vrouwtjes vertoonden afwijkingen aan de ovaria zoals poly-ovulaire follikels en talrijke meerkernige oöcyten en een toegenomen 17β-oestradiolspiegel. Verschillen in plasmasteroïd niveaus bij oudere alligators afkomstig van meren met verschillende graad van vervuiling zijn aangetoond en de vermindering in penislengte bleek het grootst te zijn in de buurt van de dicofol lozing.
Welke chemicaliën verantwoordelijk zijn voor deze effecten is nog niet volledig opgehelderd omdat nog andere stoffen met (potentieel) endocrien verstorende activiteit aanwezig zijn in het Apopka Meer (Semenza et al., 1997).

Eieren van de bijtschildpad (*Chelydra serpentina*) in de Grote Meren bevatten hoge concentraties organochloorverbindingen en vertoonden een significante verhoging van embryoafwijkingen en -sterfte (Guillette en Crain, 1996). Seksuele differentiatie bij de roodwangschildpad (*Trachemys scripta*) kan verstoord worden door blootstelling aan bepaalde PCB's. Eieren behandeld met PCB's leveren vrouwelijke individuen op bij temperaturen die normaal gezien tot een mannelijke differentiatie zouden moeten leiden (Crews et al., 1995).

5.1.5 Vissen

In Groot-Brittannië zijn uitgebreide studies verricht naar endocriene verstoring bij vissen. De aanleiding hiervoor was het verhoogd voorkomen van interseksualiteit bij blankvoorn (*Rutilus rutilus*) in de rivier Lee eind jaren '70. Stroomafwaarts van rioolwaterzuiveringsinstallaties (RWZI) werden abnormale seksratio en verstoringen van de gonadosomatische index (GSI) aangetroffen (Thames Water, 1981). In laboratorium- en veldstudies is aangetoond dat componenten in riool- en industriële effluenten verantwoordelijk zijn voor de inductie van de vitellogenese in mannelijke regenboogforel (*Oncorhynchus mykiss*). Vitellogenine is een vrouwelijk specifiek eiwit dat normaal alleen door seksueel volwassen, ovipare vrouwelijke organismen wordt gesynthetiseerd. Op bepaalde locaties werden eveneens een vertraagde testiculaire groei en een vergrote lever waargenomen. Verhoogde vitellogenine-

inductie werd aangetoond in kooi-experimenten tot 5 km stroomafwaarts van lozingspunten (Harries et al., 1996; Harries et al., 1997; Purdom et al., 1994; Sumpter, 1995; Sumpter en Jobling, 1995). Na fractionatie, screening met de recombinant gist oestrogeen bioassay en laboratoriumstudies met regenboogforel en blankvoorn werden 17β-oestradiol, oestrone en op één locatie ethinyloestradiol als de 'belangrijkste' oestrogene componenten in effluenten van zeven RWZI's (die huishoudelijk afvalwater ontvangen) geïdentificeerd. Alkylfenolen lagen beneden de detectielimiet op deze locaties, maar oestrogene activiteit van alkylfenolen in afvalwater van textielfabrieken is aangetoond bij vissen in de rivier Aire (Desbrow et al., 1996; Harries et al., 1997).

Jobling en medewerkers (1998) hebben de oestrogene effecten van riooleffluenten onderzocht in natuurlijke blankvoornpopulaties in 8 rivieren. Op plaatsen waar riooleffluenten geloosd werden, werden een significant verhoogd voorkomen van interseks en een verhoogde vitellogenese bij mannelijke vissen waargenomen. De graad van interseks was het grootst stroomafwaarts van de lozingspunten. De correlatie tussen de graad van interseks, verhoogd vitellogeninegehalte in het plasma van mannelijke vissen, de GSI en de concentratie aan effluent bevestigt het verband tussen de waargenomen effecten en de blootstelling aan de effluenten. De eigenlijke effecten van de individuele componenten zijn *sensu strictu* echter onduidelijk.

Laboratoriumstudies met mariene vissen blootgesteld aan RWZI-effluenten hebben vitellogenine inductie aangetoond bij juveniele Atlantische kabeljauw (*Gadus morhua*), juveniele Atlantische zalm (*Salmo salar*) en bot (*Platichthys flesus*) (Allen et al., 1997; Hylland en Haux, 1997). Verhoogde vitellogeninegehaltes in plasma en abnormale gonadenmorfologie is waargenomen bij bot in estuaria langs de kust van Wales en Engeland. In de meest vervuilde estuaria werd zelfs tot 20 % interseksualiteit waargenomen (Allen et al., 1999; Lye et al., 1997; Matthiessen et al., 1998).

Hansen en medewerkers (1998) toonden een toename aan van het vitellogeninegehalte in het plasma na blootstelling aan RWZI-effluenten in Duitsland. Het effluentwater bevatte o.a. 17β-oestradiol, nonylfenol, bisfenol A, ftalaten, DDT en lindaan. Gelijkaardige effecten zijn waargenomen in Zwitserland bij de beekforel (*Salmo trutta fario*) op plaatsen stroomafwaarts van RWZI's (Wahli et al., 1998).

In de Verenigde Staten en Canada zijn effecten van endocriene verstoring waargenomen in de buurt van papierfabrieken. Vispopulaties vertoonden abnormale ontwikkeling van secundaire geslachtskenmerken, verstoorde plasma steroïdspiegel, kleinere gonaden en een verminderde eiproductie (Davis en Bortone, 1992; Howell et al., 1980; McMaster et al., 1991; McMaster et al., 1992; Munkittrick et al., 1991; Munkittrick et al., 1992). Effluenten van papierfabrieken bevatten fytosterolen (voornamelijk sitosterolen). *In vivo* laboratoriumstudies met β-sitosterol hebben

effecten als vermannelijking (ontwikkeling van secundaire geslachtskenmerken), verstoorde plasma steroïdspiegel en vitellogenine-inductie aangetoond en *in vitro* experimenten toonden een oestrogene activiteit aan van β-sitosterol. β-sitosterol zou verantwoordelijk kunnen zijn voor de in het veld waargenomen effecten, maar de relatieve bijdrage van de individuele componenten in de effluenten is nog niet opgehelderd (Denton et al., 1985; MacLatchy en Van Der Kraak, 1995). Gelijkaardige effecten zijn aangetoond door Tremblay en Van Der Kraak (1999) in *in vivo* experimenten met regenboogforel blootgesteld aan β-sitosterol en papierfabriekeffluenten.

Casillas en medewerkers (1991) toonden een verminderde plasma oestradiolspiegel en vitellogenineconcentraties aan bij tong (*Parophrys vetulus*) gevangen op plaatsen met PCB en PAK vervuiling.

5.1.6 Invertebraten

Invertebraten beschikken over een aantal unieke systemen die sterk beïnvloed kunnen worden door endocrien verstorende stoffen. De ecdysones bij arthropoden, nematoden en mollusken, de niet-steroïdale farnesyl hormonen zoals het juveniel hormoon, farnesyl acetone, farnesoic acid en methyl farnesoaat spelen een belangrijke rol bij de embryogenese, ontwikkeling en reproductie van invertebraten. Vele van deze kritische hormonen worden bovendien opzettelijk nagebootst door pesticiden (Ankley et al., 1998). Naast deze invertebraat-specifieke hormonen worden bij invertebraten eveneens vertebraatachtige steroïdhormonen (bijv. oestrogenen, androgenen en progestagenen) en peptide hormonen (bijv. insuline/IGF superfamilie) aangetroffen (LaFont, 2000). Het voorkomen van endocriene verstoring in natuurlijke ecosystemen bij invertebraten is derhalve te verwachten als gevolg van effecten van bepaalde stoffen op non-target organismen. Op een Europese workshop in Weybridge (OECD, 1996) werd de nood geuit aan de ontwikkeling van nieuwe en/of de aanpassing van bestaande testen voor de monitoring van endocriene verstoring bij invertebraten.

Het typevoorbeeld van endocriene verstoring bij invertebraten is de inductie van imposeks en interseks als gevolg van blootstelling aan tributyltin (TBT) bij mariene gastropoden. Imposeks is de superpositie van mannelijke geslachtskenmerken bij vrouwelijke organismen. De graad van imposeks varieert van de ontwikkeling van een penis tot en met de groei van een vas *deferens* wat uiteindelijk kan leiden tot het verhinderen van de eileg. Verschillende veld- en laboratoriumstudies hebben het causaal verband tussen TBT-vervuiling en imposeks aangetoond. Imposeks wordt geïnduceerd vanaf een concentratie van 1 ng TBT/l (als Sn) door de inhibitie van de aromatase activiteit verantwoordelijk voor de omzetting van testosteron naar oestradiol. Endocriene verstoring als gevolg van TBT-blootstelling heeft tot drastische dalingen of zelfs volledig verdwijnen van bepaalde gastropode populaties

geleid (Bryan et al., 1986; Gibbs en Bryan, 1994; Gibbs et al., 1991; Langston, 1996; Matthiessen en Gibbs, 1998; Oehlmann et al., 1996). Imposeks is aangetroffen bij een honderdtal mariene prosobranche gastropoden. Interseksualiteit is enkel bij de alikruik (*Littorina littorea*) waargenomen (Fioroni et al., 1991). Ook trifenyltin (TFT) kan imposeks veroorzaken. Horiguchi en medewerkers (1994) toonden imposeksverschijnselen aan in Japan waar TFT-concentraties vrij hoog waren waarschijnlijk als gevolg van landbouwactiviteiten.

Laboratoriumexperimenten met watervlooien blootgesteld aan DES, 4-nonylphenol en pentachlorophenol toonden verstoringen aan in het testosteronmetabolisme en een veranderde excretie van testosteron-metabolieten. Deze effecten werden gelinkt aan een verminderde fecunditeit in de eerste en tweede generatie nakomelingen (Baldwin et al., 1995; Baldwin et al., 1996; Parks en LeBlanc, 1996).

Nabij afvalwaterlozingspunten in Schotland is een ongewone frequentie van interseks bij copepoden vastgesteld (Moore en Stevenson, 1994). Deze effecten toeschrijven aan endocrien verstorende activiteit van componenten in het afvalwater is aanneembaar, maar dit is, in tegenstelling tot beschreven de effecten bij vissen, nog niet aangetoond. Parasitische castratie zou eveneens een oorzaak kunnen zijn. Ook bij de kreeft (*Homarus americanus*) zijn interseksverschijnselen waargenomen, maar ook hier was het moeilijk om een onderscheid te maken tussen natuurlijke en antropogene oorzaken (Sangalang en Jones, 1997).

5.2 Endocriene verstoring in België en Nederland

Zoals eerder vermeld staat het onderzoek naar endocriene verstoring in België nog in zijn kinderschoenen. In Nederland echter zijn een aantal waargenomen effecten gelinkt aan het voorkomen van endocrien verstorende stoffen in het milieu (Gezondheidsraad, 1999).

5.2.1 Mens

In de laatste 20 jaar is in Vlaanderen een sterke achteruitgang waargenomen van de spermakwaliteit bij jonge gezonde kandidaat spermadonoren (Van Waeleghem et al., 1996). De gemiddelde spermaconcentratie daalde slechts matig. Vooral de functionele karakteristieken van de spermatozoa zoals motiliteit en morfologie, zijn dermate verslechterd dat het aantal mannen met suboptimale spermakwaliteit gestegen is van 5 naar 45 % en het percentage infertiele mannen toenam van 1,6 naar 9 %. Deze effecten worden, om hoger vermelde redenen, hoofdzakelijk toegewezen aan blootstelling aan endocrien verstorende stoffen in het milieu.

5.2.2 Andere zoogdieren

De sterke reductie van de zeehondenpopulatie in de Nederlandse Waddenzee

bleek gecorreleerd met de graad van vervuiling. De concentraties van PCB's in weefsel van zeehonden afkomstig uit de Nederlandse Waddenzee waren zeven tot tien maal hoger dan deze in weefsel van zeehonden uit de Duits/Deense Waddenzee waar de reproductie normaal was (Reijnders, 1980). In studies waarbij gewone zeehonden gevoederd werden met vis uit de Nederlandse Waddenzee werden bij vrouwelijke dieren tijdens de implantatieperiode van de bevruchte eicel, lagere 17β-oestradiolspiegels gevonden. Dit effect was gecorreleerd met de PCB-contaminatie in het voedsel (Boon, 1987; Reijnders, 1986, 1996). Ook zijn verlaagde concentraties van thyroïdhormonen waargenomen. Deze verlaging zou een gevolg zijn van de competitie tussen de thyroïdhormonen en hydroxy-PCB-metabolieten voor de binding met een transporteiwit (Brouwer et al., 1989). Concentraties van PCB's en 4,4'-DDE in bloed van zeehonden gevoederd met vis uit de Nederlandse Waddenzee waren respectievelijk een factor vijf en twee hoger dan in zeehonden gevoederd met ongecontamineerde vis uit de Atlantische Oceaan (Boon et al., 1988).

5.2.3 Vogels

Verstoring van de reproductie bij visetende vogelsoorten als gevolg van blootstelling aan DDT, PCB's en dioxine-achtige stoffen zijn in Nederland al in 1969 beschreven (Koeman et al., 1969).

Uit veld- en laboratoriumonderzoek met de aalscholver (*Phalacrocorax carbo*) en de visdief (*Sterna hirundo*) is gebleken dat de concentraties van organochloorverbindingen in deze Nederlandse toppredatoren sterk verminderd zijn sinds de jaren zeventig. De concentraties in hun voeding zijn echter nog steeds hoog genoeg om reproductiestoornissen te veroorzaken. In een aantal broedkolonies van de aalscholver is de aanwezigheid van DDT-metabolieten in de eieren en het voedsel gecorreleerd met een verdunning van de eischaal. Blootstelling aan PCB's hadden een vermindering van het percentage uitgekomen eieren en van het broedsucces tot gevolg (Dirksen et al., 1995). Onderzoek met aalscholverembryo's uit twee verschillende blootgestelde kolonies toonde eveneens aan dat *in ovo* blootstelling aan milieurelevante concentraties van PCB's en dioxines een negatief effect heeft op de embryonale ademhaling en ontwikkeling (Van den Berg et al., 1994a,b).

Laboratoriumstudies met eieren en embryo's van de visdief toonden een vermindering aan van de broedduur met ongeveer twee dagen. Bovendien werden veranderingen in cytochroom P450-inductie en schildklierhormoon- en vitamine A-huishouding waargenomen. Deze effecten bleken gecorreleerd met de concentraties van PCB's en dioxines in de dooierzak (Bosveld et al., 1995; Murk et al., 1994, 1996).

5.2.4 Vissen

Bij bot uit het Ijsselmeer, de Euromonding en het Noordzeekanaal is een significante inductie van de vitellogenese waargenomen bij mannelijke vissen (Van den Brink en Vethaak, 1997). Deze effecten waren bovendien nog waarneembaar wanneer deze vissen zich op de in open zee gelegen paaigronden (20 tot 40 km van de Hollandse Noordzeekust) bevonden. Wegens de vrij lange aanwezigheid van vitellogenine in het bloed (tot enkele weken) is het waarschijnlijk dat het endocrien verstorend effect geïnduceerd is gedurende de periode dat de vissen zich in de estuaria bevonden (Allen et al., 1999; Matthiessen et al., 1998). Het niveau van de inductie van de vitellogenese is in de Nederlandse en de Engelse estuaria en kustwateren gelijkaardig waardoor het voorkomen van interseksualiteit bij de mannelijke bot in Nederland en eventueel België aanneembaar lijkt. Hierover zijn echter nog geen gegevens beschikbaar. Sinds de jaren tachtig is echter het voorkomen van embryonale afwijkingen bij diverse vissoorten in de kustwateren van de Noordzee waargenomen, maar correlaties met de aanwezigheid van endocrien verstorende stoffen zijn onduidelijk (Cameron et al., 1992).
Mesocosmos-experimenten waarbij bot werd blootgesteld aan matig vervuild (klasse2) baggerslib uit de haven van Rotterdam toonden een premature vitellogenese bij vrouwelijke vissen aan. Een verschuiving van de afrijptijd met drie tot vier maanden werd waargenomen. Het exacte werkingsmechanisme kon echter niet aangetoond worden (Janssen et al., 1997).

Na een aantal monitoringcampagnes van Vlaamse waterlopen uitgevoerd door het Laboratorium voor Milieutoxicologie en Aquatische Ecologie van de Universiteit Gent in samenwerking met het Instituut voor Bosbouw en Wildbeheer zijn indicaties van mogelijke endocriene verstoring bij zoetwatervissen aangetoond (Versonnen et al., niet gepubliceerd). Mogelijke verschijnselen van interseks bij blankvoorn en verhoogde vitellogenese bij blankvoorn en zeelt (*Tinca tinca*) werden waargenomen in waterlopen die voornamelijk huishoudelijk afvalwater ontvangen. Welke stoffen en mechanismen verantwoordelijk zijn, werd niet aangetoond. Deze verschijnselen worden momenteel verder onderzocht.

5.2.5 Invertebraten

De eerder vermelde effecten van TBT-vervuiling zoals imposeks en interseks bij mariene gastropoden, zijn ook waargenomen langs de kusten van de Noordzee. Populaties van de purperslak (*Nucella lapillus*) en de alikruik in de kustgebieden van de Noordzee zijn in mindere of meerdere mate aangetast (NSTF, 1993). In de Waddenzee is de wulk (*Buccinum undatum*) verdwenen en in het Nederlandse gedeelte van de Noordzee zijn de populaties verminderd. Schade als gevolg van visserij kan hierin echter ook een rol spelen. Langs de Belgische Kust zijn de purperslakpopulaties volledig verdwenen. Buiten de kustgebieden is imposeks

waargenomen bij de wulk in het zuidelijk deel van de Noordzee en in de Oosterschelde is imposeks aangetroffen bij meer dan 90 % van de vrouwelijke wulken (ten Hallers-Tjabbes et al., 1994; Vyncke en Devolder, 1994). In de Duitse Waddenzee is interseksualiteit waargenomen bij de alikruik (Bauer et al., 1997).

Een belangrijk aspect van imposeksverschijnselen op populatieniveau is het verschil tussen de wulk en de purperslak. Imposeks bij de purperslak leidt tot een afsluiting van de vrouwelijke geslachtsopening door de ontwikkelende vas deferens waardoor de slak zich niet meer kan voortplanten. Dit is niet zo bij de wulk, waar imposeks enkel tot een reductie in de reproductie zal leiden (Mertens en Van Zwol, 1988).

5.3 Emissie van natuurlijke en synthetische hormonen in het milieu

De excretie van endogene geslachtshormonen gebeurd hoofdzakelijk via de urine en de fecaliën. Ook synthetische hormonen gebruikt voor o.a. anticonceptie en medische doeleinden worden op deze manier uitgescheiden. Om een idee te krijgen van de totale hormoonemissies naar het milieu, wordt een schatting gemaakt op basis van bevolkingscijfers voor 1998 van het Nationaal Instituut voor Statistiek (NIS) en de grootte van de veestapel in België. Gegevens over de omvang van de veestapel zijn gesteund op het Landbouwstatistisch Jaarboek 1997.

5.3.1 Mens

Zwangere vrouwen scheiden tijdens de laatste periode van de zwangerschap ongeveer 30 mg oestrogenen per dag uit via de urine. Deze oestrogenen worden voornamelijk als geconjugeerd 17β-oestradiol, oestriol en oestron uitgescheiden (Adlercreutz en Martin, 1976; Fotsis, 1987; Murad en Kuret, 1991). De conjugatie van organische stoffen (bijv. aan glucuronzuur of sulfaten) is een detoxificatiemechanisme waarmee een organisme zich beschermt tegen de toxische werking van bepaalde agentia. Conjugatie maakt de stof meer wateroplosbaar waardoor ze sneller uit het lichaam wordt verwijderd. Als gevolg van bacteriële degradatie kan de minder actieve, geconjugeerde vorm echter terug omgezet worden naar de actieve, ongeconjugeerde vorm. Bij een geschat gemiddelde van 10 mg oestrogenen per dag gedurende de hele zwangerschap en met een totaal van ruim 125.000 zwangerschappen per jaar (NIS, 1999a), bedraagt de totale hoeveelheid oestrogenen uitgescheiden door zwangere vrouwen ongeveer 938 g per dag. Niet-zwangere vrouwen scheiden via de urine ongeveer 30 µg oestrogenen per dag uit (Murad en Kuret, 1991). Bij een totaal van ongeveer drie miljoen niet-zwangere vrouwen (NIS, 1999b), bedraagt de hoeveelheid oestrogenen uitgescheiden via de urine 90 g per dag. De hoeveelheid natuurlijke oestrogenen uitgescheiden door vrouwen via de urine bedraagt derhalve 1028 g per dag. Volgens Korach en medewerkers (1995) wordt bovendien 20 % van de oestrogenen

uitgescheiden via de fecaliën, zodat de totale hoeveelheid oestrogenen uitgescheiden door vrouwen ongeveer 1285 g per dag bedraagt. Mannen scheiden per dag gemiddeld 11,5 µg oestrogenen uit via de urine (Murad en Kuret, 1991). Bij een totaal van ongeveer drie miljoen mannen (NIS, 1999b), worden gemiddeld 34,5 g oestrogenen per dag uitgescheiden. De totale emissie van natuurlijke oestrogenen naar het milieu als gevolg van menselijke excretie bedraagt dus ongeveer 1,3 kg per dag.

De actieve component van de anticonceptiepil, ethinyloestradiol, wordt eveneens uitgescheiden via de urine en de fecaliën. Volgens Carr en Griffin (1998) wordt 24 uur na opname tot 60 % uitgescheiden via de urine. De fecaliën bevatten voornamelijk de ongeconjugeerde vorm van ethinyloestradiol. In de urine word 16 % in ongeconjugeerde vorm gevonden (Reed et al., 1972). Op basis van de structuur van de Belgische bevolking kan het aantal pilgebruiksters in België geschat worden op 1,4 miljoen (NIS, 1999b). De meeste contraceptiepillen bevatten tussen de 20 en 50 µg ethinyloestradiol per pil (Bouvy et al., 1996). Bij een gemiddelde geschatte dagelijkse dosis ethinyloestradiol van 35 µg, bedraagt de totale uitscheiding door de Belgische pilgebruiksters ongeveer 50 gram per dag. Deze waarde is waarschijnlijk een overschatting aangezien uitgegaan wordt van een volledige excretie van (ongemetaboliseerd) ethinyloestradiol.

5.3.2 Rundvee

De totale draagtijd bij koeien varieert tussen 277 en 286 dagen. Vanaf ongeveer dag 110 van de dracht bij koeien begint de productie en uitscheiding van oestrogenen, voornamelijk via de fecaliën duidelijk toe te nemen (17α-oestradiol, 17β-oestradiol en oestron in ongeconjugeerde vorm, respectievelijk 56, 32 en 11 %). Van dag 115 tot de geboorte worden gemiddeld 83 µg oestrogenen per kilogram fecaliën uitgescheiden. Aan het einde van de dracht bedraagt het totale oestrogeengehalte in de fecaliën gemiddeld 0,5 mg/kg fecaliën (Hoffman et al., 1997). Over de hele dracht betekent dit een uitscheiding van ongeveer 50 µg oestrogenen per kilogram fecaliën. Koeien kalveren gemiddeld de eerste keer op 2,2 jarige leeftijd en worden op een leeftijd van gemiddeld 4,6 jaar afgevoerd (Gezondheidsraad, 1999). Bij een dracht van 280 dagen betekent dit dat zij ongeveer 69 % van hun levensduur drachtig zijn. Tabel I geeft een overzicht van de oestrogeensecretie door vrouwelijke runderen ouder dan één jaar. Slachtvee is hierin niet in rekening gebracht.

Tabel I: Overzicht van de oestrogeensecretie in België door vrouwelijke runderen ouder dan één jaar (exclusief slachtvee)

Populatie	Aantal dieren (x 1000)	Fecaliën-productie (kg/dier/dag)	Concentratie oestrogenen in fecaliën (µg/kg)	Totale oestrogeen-secretie via fecaliën (g/dag)
Melk- en kalfkoeien	1174	25	50	1013
Jongvee	623	12,5	50	269

5.3.3 Varkens

De normale dracht van varkens duurt 110 tot 120 dagen. Uitscheiding van oestrogenen gebeurt voornamelijk via de urine als oestronsulfaat. Gegevens over de oestrogeenconcentratie in de urine zijn zeer variabel. De oestrogeenproductie en -secretie stijgen de eerste 27 dagen van de dracht tot 6 mg oestronsulfaat per liter urine, waarna een daling optreedt tot waarden iets boven het niveau van vóór de dracht (Atkinson en Williamson, 1987). Na ongeveer 50 dagen tot de geboorte stijgt de productie en secretie weer tot 5 mg per liter urine (Reaside, 1963). Volgens Reaside (1963) en Edgerton en medewerkers (1971) ligt de concentratie van oestrogenen op het einde van de dracht een factor 10 tot 20 hoger dan het maximum van de eerste 30 dagen. Wegens de discrepanties tussen verschillende studies, heeft de Gezondheidsraad (1999) de hoeveelheid oestrogenen in de urine geschat op gemiddeld 0,5 tot 1 mg/l gedurende de hele dracht. De geschatte oestrogeensecretie door zeugen in België wordt weergegeven in Tabel II. Voor deze berekening is uitgegaan van 365 dagen dracht per jaar.

Tabel II: Oestrogeensecretie door zeugen in België

Populatie	Aantal dieren (x 1000)	Urineproductie (l/dier/dag)	Concentratie oestrogenen in urine (mg/l)	Totale oestrogeen-secretie via urine (kg/dag)
Zeugen	754	5	0,5-1	2-4

5.3.4 Kippen

Kippen scheiden naast oestrogenen ook aanzienlijke hoeveelheden testosteron uit. In Tabel III zijn de concentraties aan oestrogenen en testosteron in mest van kuikens, leghennen en hanen weergegeven (Shore et al., 1993). De uitscheiding van oestrogenen gebeurt als 17β-oestradiol, oestron en 17α-oestradiol (Bishop en Hall, 1991).

Tabel III: Hormoonconcentraties in pluimveemest (Shore et al., 1993)

	testosteron (µg/kg)	oestrogenen (µg/kg)
Kuiken (♀)	133	65
Kuiken (♂)	133	14
Leghennen	254	533
Hanen	670	93

Voor de schatting van de hormoonemissie via kippenmest worden de leg- en meststapel en het aantal jonge hennen beschouwd (Tabel IV). Voor de berekeningen van de emissie door de jonge hennen werden dezelfde hormoonconcentraties als bij de vrouwelijke kuikens gebruikt. Hierbij dient opgemerkt te worden dat deze concentraties waarschijnlijk een onderschatting zijn.

Tabel IV: Hormoonsecretie door kippen in België

Populatie	Aantal dieren (x 1000)	Mestproductie (g/dier/dag)	Concentratie oestrogenen in mest (µg/kg)	Oestrogeensecretie via mest (g/dag)	Concentratie testosteron in mest (µg/kg)	Testosteronsecretie via mest (g/dag)
Legstapel	11.678	50	533	311	254	148
Meststapel	29.401	50	533	784	254	373
Kweekstapel	1976	50	533	53	254	25
Jonge hennen	4979	50	65	16	133	33

5.4 Totale emissie van natuurlijke en synthetische hormonen door mens en dier

De totale schatting van de emissie van oestrogenen door mens en dier in België bedraagt ruim 5,7 tot 7,7 kilogram per dag. Op jaarbasis betekent dit voor België een oestrogeenemissie van ruim 2,08 tot 2,81 ton! Deze waarden zijn waarschijnlijk een onderschatting aangezien de waarden voor koeien en kippen, respectievelijk 1282 en 1164 g/dag, beduidend hoger zouden kunnen liggen. Bovendien zijn andere groepen, zoals paarden, schapen, geiten, konijnen, eenden, ganzen, kalkoenen, parelhoenen en huisdieren niet in rekening gebracht. Ook de mogelijkheid van een grensoverschrijdende vervuiling is buiten beschouwing gelaten. De berekende waarde voor ethinyloestradiol (50 g/dag) is waarschijnlijk een

overschatting omdat de uitscheiding gelijk gesteld is aan de inname. Exact gemeten milieuconcentraties in België zijn (nog) niet bekend, wat de nood voor hormoonconcentratiebepalingen in het milieu onderstreept.

De teelt van runderen is min of meer gelijk verdeeld tussen Vlaanderen en Wallonië. De varken- en kippenteelt echter situeert zich voornamelijk in Vlaanderen, respectievelijk 95,5 en 92,6 % van de totale activiteit in België. Hierdoor kan de milieulast in Vlaanderen beduidend hoger liggen, indien aangenomen wordt dat na opslag de mest niet getransporteerd wordt. Dit betekent voor Vlaanderen een oestrogeenemissie via de veeteelt van 3,6 tot 5,5 kg/dag. In Wallonië wordt 'slechts' 0,76 tot 0,86 kg oestrogenen per dag vrijgesteld. Dit zijn schattingen zonder de oestrogeensecretie door de mens in rekening te brengen aangezien geen verdeling van de geboortecijfers tussen Wallonië en Vlaanderen beschikbaar waren. Toch kan gesteld worden dat de milieustress per oppervlakte-eenheid als gevolg van oestrogenensecretie, in Vlaanderen veel hoger is dan in Wallonië. Wetende dat oestrogenen al bij concentraties van ng/l bij vissen effecten kunnen veroorzaken, zijn mogelijke effecten van endocriene verstoring niet onrealistisch (Larsson et al., 1999). Uiteraard spelen andere milieufactoren zoals o.a. biobeschikbaarheid, temperatuur en bacteriële degradatie ook een rol.

De verdeling van de verschillende hormonen tussen de milieumatrices is afhankelijk van de manier waarop de hormonen in het milieu terechtkomen. Hormonen door de mens uitgescheiden komen via RWZI's in het water terecht. Hormonen uitgescheiden door de veeteelt komen via de fecaliën rechtstreeks of onrechtstreeks (na tijdelijke opslag) op het land terecht, waarna ze via uitspoeling in oppervlaktewateren terecht komen. Bovendien zullen door de intensieve veeteelt hormonen via afwateringssystemen en reiniging en onderhoud van de infrastructuur eveneens in het water terecht komen.

De afbraak van hormonen in het milieu gebeurt vrij traag en onvolledig. Stumpf en medewerkers (1996) vonden een degradatie van oestradiol en ethinyloestradiol van respectievelijk 75 en 89 % na vijf dagen. Shore en medewerkers (1993) rapporteerden na vijf dagen een afbraak van 20 tot 88 %. In kippenmest blijven oestrogenen en testosteron zelfs enkele maanden aanwezig. Bij een actieve slibzuivering wordt ethinyloestradiol na één week slechts voor 73 % afgebroken. Na drie dagen is het nog voor 100 % aanwezig (Umweltbundesamt, 1996). De afbraak van hormonen in het milieu blijkt dus in het beste geval meerdere dagen in beslag te nemen.

5.5 Fyto- en myco-oestrogenen

Veel door planten gesynthetiseerde stoffen blijken een (anti-)oestrogene activiteit te bezitten. Fyto-oestrogenen zijn onder te verdelen in vier groepen: isoflavonen, coumestanen, resorcyclische zure lactonen en lignanen. Via consumptie

van plantaardig voedsel kan de opname van fyto-oestrogenen tot enkele honderden milligrammen per dag bedragen. Deze stoffen zijn echter snel biodegradeerbaar en vertonen bijgevolg een laag vermogen tot bioaccumulatie (Toppari et al., 1996). Bepaalde voedingspatronen (bijv. vegetariërs en veganisten) kunnen echter wel leiden tot een verhoogde opname van fyto-oestrogenen zodat bepaalde groepen een hoger risico lopen om nadelige effecten te ondervinden.

Er wordt verondersteld dat planten fyto-oestrogenen aanmaken als verdedigingsmechanisme tegen herbivoren. In Australië nam in de jaren ’40 het aantal doodgeboren lammeren en steriele ooien om onbekende redenen sterk toe. Later werden deze verschijnselen geassocieerd met de aanwezigheid van fyto-oestrogenen in de ondergrondse klaver (*Trifolium subterraneum*). Bij kwartels die grazen op weilanden rijk aan peuldragende planten werd in periodes van droogte een daling van de legselgrootte waargenomen. Deze planten produceren in ongunstige periodes (droogte) grote hoeveelheden isoflavonen om de begrazing door de kwartels tegen te gaan (Tolman, 1998). Varkens blijken gevoelig te zijn voor zearalenon, een myco-oestrogeen geproduceerd door de schimmel *Fusarium graminearum*. Na eten van beschimmeld veevoeder werden afwijkingen van het geslachtsstelsel en een verminderde vruchtbaarheid waargenomen en nam het aantal abortussen toe.

Een positief effect van fyto-oestrogenen is het mogelijke verband tussen het minder voorkomen van borstkanker en de hogere consumptie van soja in ZO-Azië. Soja bevat grote hoeveelheden isoflavonen welke de kans op borstkanker zouden verminderen. Ook het voorkomen van prostaatkanker zou negatief gecorreleerd zijn met de consumptie van soja. Soja bevat een 5α-reductase inhibitor waardoor testosteron minder kan omgezet worden in zijn meer actieve metaboliet dihydrotestosteron.

Om op basis van de plantenteelten een schatting te maken van de milieustress voor zowel mens als dier als gevolg van blootstelling aan fyto-oestrogenen is een uitgebreide kennis van de activiteit van de fytohormonen, de concentratie in de teelten en de consumptie en het gebruik van dergelijke teelten door mens en dier noodzakelijk. Het is echter voorbarig te stellen dat geen effecten ten gevolge van fyto-oestrogenen zouden optreden omdat de concentraties van fyto-oestrogenen die in het milieu vrijkomen veel hoger liggen dan deze van natuurlijke oestrogenen en chemische pseudo-oestrogenen. Bovendien zijn effecten waargenomen bij vissen na blootstelling aan effluenten van papierfabrieken en houtzagerijen. De endocrien verstorende activiteit van dergelijke effluenten zou mede het gevolg zijn van de aanwezigheid van bepaalde fytosterolen, voornamelijk β-sitosterol. β-sitosterol is een fyto-oestrogeen dat endocrien verstorende activiteit vertoont bij vissen, zowel *in vivo* als *in vitro* (Cook et al., 1997; MacLatchy et al., 1997; Tremblay en Van Der Kraak, 1998, 1999).

5.6 Antropogene (potentieel) endocrien verstorende stoffen in het milieu

Naast de reeds eerder genoemde natuurlijke en synthetische hormonen bestaan er talloze andere chemicaliën die het endocrien systeem kunnen ontregelen. Deze xenobiotische stoffen zijn structureel zeer divers en vertonen slechts in sommige gevallen een chemische structuur analoog aan deze van natuurlijke hormonen. (Potentieel) endocrien verstorende stoffen zijn o.a. bepaalde pesticiden zoals organochloorverbindingen, organotinverbindingen, organofosforverbindingen en triazines; alkylfenolen en alkylfenolpolyethoxylaten; polyaromatische koolwaterstoffen (PAK's); ftalaten; polygechloreerde bifenylen (PCB's); dioxines en bisfenol A. Een uitgebreide lijst van (potentieel) endocrien verstorende stoffen wordt weergegeven in de database die samengesteld is in uitvoering van dit onderzoeksproject. Hierna wordt een beknopt overzicht gegeven van het voorkomen van deze potentieel endocrien verstorende stoffen in België. Er wordt opgemerkt dat enkel data met betrekking tot (mogelijke) endocrien verstorende stoffen zijn geëvalueerd. Stoffen waarvoor geen of onvoldoende bewijzen zijn van endocriene verstoring werden buiten beschouwing gelaten.

Op initiatief van de Technische Commissie Noordzee (MNZ) zijn een aantal studies uitgevoerd naar de emissies van metalen, organische micro-verontreinigingen, PAK's en nutriënten naar lucht en water voor de periode 1985-1995. Voor pesticiden is bovendien de verkoop en het gebruik in België voor dezelfde periode bepaald (MNZ, 1995). In Tabel V en VI wordt een overzicht gegeven van de (mogelijk) endocrien verstorende stoffen die in deze databanken opgenomen zijn. Uit deze studies blijkt dat er de laatste jaren een dalende trend waarneembaar is wat betreft de emissies van deze polluenten. Enkel de dioxine uitstoot steeg tussen 1985 en 1990. Wat betreft de emissie van metalen, zou volgens MNZ (1995) vooral zink (968 ton/jaar) een zware milieulast vormen. De belangrijkste emissiebronnen naar water zijn diffuse bronnen (63%) zoals corrosie van zinken bouwmaterialen, slijtage van autobanden en afspoeling van atmosferische depositie, huishoudelijk afvalwater (16%) en industrie (20%). De emissie van zink naar de lucht gebeurt vooral via ijzer- en staalindustrie (50%), non-ferro industrie (18%), verbranding van huishoudelijk afval (16%), wegverkeer met diesel en benzine (10%), glasindustrie (3%), steenkoolcentrales (1%) en slijtage van autobanden (1%). De emissie van PAK's en dioxines gebeurt vooral naar de atmosfeer en in mindere mate naar water. Als gevolg van atmosferische depositie echter zou een groot aandeel van deze stoffen uiteindelijk toch in het aquatisch milieu terechtkomen. Puntbronnen (41%) van PAK-uitstoot zijn houtbescherming met creosoot (256 ton), scheepswerven (4 ton), sinter- en cokesfabrieken (3,5 ton). Verbranding van huishoudelijk afval en thermische centrales leveren slechts zeer geringe bijdragen. De belangrijkste diffuse bronnen (59%) zijn het wegtransport (260

ton) en asfalteringen (108 ton). De voornaamste dioxinebronnen (642 g toxische equivalenten (TEQ)) zijn de verbranding van huishoudelijk afval (29%), verwarming van gebouwen (19%), non-ferro industrie (16%), verbranding van ziekenhuisafval (12%), ijzer- en staalindustrie (9%) en cement- en kalkindustrie (8%). Ter vergelijking zijn als gevolg van de dioxinecrisis naar schatting ongeveer 0,1 tot 1 g dioxines en 5 tot 50 kg PCB's in de voedselketen terechtgekomen. Hierdoor zijn miljoenen kippen besmet geworden, maar deze hoeveelheden zijn onvoldoende om ook de varken- en runderketting te besmetten. De risico's voor de volksgezondheid zijn derhalve waarschijnlijk zeer klein tot nihil (Bernard et al., 1999). Bij de milieuramp in Seveso kwamen ongeveer 2 kg dioxines in het milieu terecht en de Amerikanen brachten in Vietnam 230 kg dioxines (Agent Orange) in het milieu.

Het verbruik van pesticiden vertoont eveneens een daling in de laatste decennia. Enkel atrazine en lindaan worden nog vrij veel gebruikt, respectievelijk <142 en <50 ton (MNZ, 1995). De voornaamste emissiebronnen van pesticiden zijn de land- en tuinbouw. Atrazine wordt veel gebruikt in maïsteelt, lindaan in suikerbietenteelt en trifenyltin in de aardappelteelt. In de tuinbouw worden vooral endosulfan en organofosforinsecticiden gebruikt. Daarnaast zijn de industrie (groenteverwerking, formulatie en productie van pesticiden, vilbeluik, textiel en houtverwerking) en het particulier gebruik (simazine als onkruidverdelger) niet te verwaarlozen emissiebronnen. Ook de pesticideninflux via Franse waterlopen vormt een belangrijke bron van vervuiling (Demeyere en Plasman, 1993). TBT wordt vooral gebruikt als aangroeiwerend middel op de romp van schepen en komt via uitloging in het aquatisch milieu terecht.

Het voorkomen van pesticiden in Vlaamse waterlopen werd reeds onderzocht in verschillende studies. Het Studiecentrum voor Water bepaalde de concentraties van stikstofherbiciden in oppervlaktewater, grondwater en regenwater. De drinkwaternorm voor deze stoffen is 0,1 µg/l. In oppervlaktewater werden voor atrazine, simazine en diuron in respectievelijk 65, 41 en 58 % van de analyses waarden boven de drinkwaternorm vastgesteld. Atrazine- en diuronconcentraties in regenwater bleken in ongeveer één vijfde van de monsters boven deze norm te liggen. Gehaltes in het grondwater lagen rond de drinkwaternorm (Quaghebeur, 1995). Tabel VII geeft een overzicht van deze data.

In de slotverklaring van de Derde Internationale Conferentie over de Bescherming van de Noordzee (Den Haag, 7-8 maart 1990) werden een aantal maatregelen opgelegd om de stroom van polluenten naar het milieu te reduceren. Uitgaande van deze maatregelen werd een studie uitgevoerd i.v.m. pesticiden in Belgische oppervlaktewateren (Demeyere en Plasman, 1993). Bovendien worden door de Vlaamse Milieumaatschappij (VMM) jaarlijks monitoringcampagnes naar pesticiden in oppervlaktewateren uitgevoerd. Resultaten van deze studies zijn weergegeven in Tabel VIII.

Hoewel lindaan nog in aanzienlijke hoeveelheden gebruikt wordt, blijkt de concentratie in oppervlaktewateren gemiddeld onder de drinkwaternorm van 0,1 µg/l te liggen. Het gebruik van pentachlorofenol (PCP) is verboden voor landbouwkundige toepassingen sinds 1985 en voor niet landbouwkundige toepassingen sinds 1990 (uitgezonderd een PCP-ester sinds 1993). Toch worden gemiddeld waarden gevonden die maar net onder de norm liggen, met een maximum concentratie van 3,1 µg/l. Diuron, atrazine, simazine en triphenyltin worden het meest aangetroffen. De maximale concentraties voor diuron en simazine bedroegen respectievelijk 23,1 en 28,7 µg/l.

Tabel V: Overzicht van Belgische emissies van (mogelijk) endocrien verstorende stoffen in de periode 1985-1995 (MNZ, 1995)

Stof	Emissie water (ton/jaar)			Emissie lucht (ton/jaar)			Op-
	1985	1990	1995	1985	1990	1995	merkingen
Zink	771	698	527	534	501	441	
		-10%	*-32%*		*-6%*	*-18%*	t.o.v.1985
Cadmium	14,2	2,7	2	16,8	11	8,7	
		-81%	*-86%*		*-34%*	*-48%*	t.o.v.1985
Kwik	2,3	2,1	2,1	13,3	9,1	8	
		-11%	*-11%*		*-3,2%*	*-40%*	t.o.v.1985
PAK's	19,7	14,6	12	935	870,5	649	
		-25,8%	*-39%*		*-6,9%*	*-31%*	t.o.v.1985
Dioxines	6,21	6,87	3,77	850	892	642	
(g TEQ)		***+11%***	*-39%*		***+5%***	*-24%*	t.o.v.1985

Tabel VI: Overzicht van gebruik- en verkoopscijfers voor België van pesticiden met (mogelijk) endocrien verstorende werking in de periode 1985-1995 (MNZ, 1995)

Stof	Verkoopcijfer (ton/jaar)			Opmerkingen
	1985	1990	1995	
Lindaan	100	66,6	<50	
		-34%	*-50%*	t.o.v. 1985
Pentachlorofenol	-	-	0	
			-100%	t.o.v. 1985
Trifluralin	17,2	6,6	<4,3	
		-62%	*-75%*	t.o.v. 1985
Endosulfan	28,3	29,3	17	
		+4%	*-40%*	t.o.v. 1985
Simazine	58,5	57,2	<29	
		-2%	*-50%*	t.o.v. 1985
Atrazine	283	244	<142	
		-14%	*-50%*	t.o.v. 1985
Tributyltin	-	15-24	14-23	
			-4%	t.o.v. 1985
Trifenyltin	60,5	44	35,7	
		-27%	*-40%*	t.o.v. 1985
Malathion	18,3	11,1	<9	
		-40%	*-50%*	t.o.v. 1985
Parathion	46,8	38,2	<21	
		-18%	*-55%*	t.o.v. 1985

Tabel VII: Maximale concentraties (µg/l) van stikstofherbiciden in oppervlakte-water, regenwater en grondwater in Vlaanderen (Quaghebeur, 1995)

Stof	Oppervlaktewater	Regenwater	Grondwater
Simazine	8,9	0,19	0,31
Atrazine	16,25	1,62	0,1
Diuron	27,2	3,43	0,1
Linuron	0,43	0	0

Vyncke en Devolder (1994) hebben een studie uitgevoerd naar TBT-concentraties in sedimenten van Belgische kustwateren en havens (Tabel IX). De gevonden TBT-concentraties waren dermate hoog (tot 895 µg TBT/kg sediment) dat zij, al dan niet in combinatie met andere factoren zoals schade door visserij, de oorzaak kunnen zijn voor het verdwijnen van de purperslak langs de Belgische Kust.

Tabel VIII: Concentraties van pesticiden (µg/l) in Belgische oppervlaktewateren

Stof	Mediaan	Gemiddelde	Maximum	Referentie
Lindaan	0,016	0,04	0,747	Demeyere en Plasman, 1993
Pentachlorofenol	0,033	0,099	3,1	Demeyere en Plasman, 1993
Trifluralin	<dl[1]	0,058	0,285	Demeyere en Plasman, 1993
Endosulfan α	<dl[1]	0,01	0,531	Demeyere en Plasman, 1993
	0,0047	0,0071	0,065	VMM, 1997
Endosulfan β	<dl[1]	0,008	0,053	Demeyere en Plasman, 1993
	0,0047	0,0061	0,066	VMM, 1997
Simazine	0,071	0,352	0,071	Demeyere en Plasman, 1993
	0,145	0,533	28,7	VMM, 1997
Atrazine	0,262	0,849	8,3	Demeyere en Plasman, 1993
	0,33	0,59	14,9	VMM, 1997
Trifenyltin	<dl[1]	0,406	3,4	Demeyere en Plasman, 1993
Malathion	<dl[1]	0,026	0,087	Demeyere en Plasman, 1993
Parathion	<dl[1]	0,03	0,178	Demeyere en Plasman, 1993
Diuron	0,485	0,882	23,08	VMM, 1997

[1] dl: detectielimiet

Tabel IX: TBT-concentraties in sedimenten aan de Belgische Kust (µg/kg DW) (Vyncke en Devolder, 1994)

Locatie	Mediaan	Minimum	Maximum
Nieuwpoort: haven[1]	17	<10	36
Oostende: haven	26	<10	75
Blankenberge:jachthaven	22	<10	74
Zeebrugge: handelshaven	16	<10	73
Zeebrugge: vissershaven	71	53	98
Zeebrugge: toegang tot de oude zeesluis	222	172	895
Zeebrugge: Tijdok[2]	102	75	575
Belgisch Continentaal Plat	<10	-	-
Marien[3]	<10	<10	13[4]
Beunmonsters[5]	<10	-	-

Tanghe en medewerkers (1999) en De Coen en medewerkers (1998) toonden met behulp van de gisttest een oestrogene activiteit aan van water- en sedimentstalen genomen op verschillende locaties in Vlaanderen. De gisttest is een *in vitro* bioassay met genetisch gemanipuleerde gist (*Saccharomyces cerevisiae*), die de menselijke oestrogeenreceptor tot expressie brengt, waarmee de oestrogene activiteit van bepaalde stoffen kan geëvalueerd worden. Nonylfenolconcentraties van <1 µg/l tot 122 µg/l werden gedetecteerd in effluenten en oppervlaktewateren in Vlaanderen. De hoogste concentraties werden waargenomen in industriële effluenten en oppervlaktewateren in geïndustrialiseerde gebieden. Er kon echter geen correlatie aangetoond worden tussen de oestrogene activiteit van de monsters en de gemeten nonylfenolconcentraties (Tanghe et al., 1999). De oestrogene activiteit van bepaalde sedimentextracten was vooral te wijten aan de aanwezigheid

[1] hoofdzakelijk jachthaven

[2] dok tussen de toegang tot de oude zeesluis en de eigenlijke vissershaven

[3] mariene toegangsgeulen tot de havens

[4] rede van Oostende

[5] monsters genomen in het beun van een baggerschip

van organochloorpesticiden, PAK's en PCB's (De Coen en Janssen, 1998).

Metingen van de Antwerpse Waterwerken (AWW) toonden aan dat tot 1996 atrazine (0,05-0,4 µg/l), dibutylftalaat (0,3-0,9 µg/l) en dioctylftalaat (0,05-0,5 µg/l) na zuivering in het drinkwater in België aangetroffen werden. Na in gebruik name van actieve koolfilters voor de zuivering van oppervlaktewateren bleef de concentratie aan atrazine beneden de norm van 0,1 µg/l. Gemeten concentraties van 17β-oestradiol, 17α-ethinyloestradiol, DES en 4-octylfenol waren lager dan 0,01 µg/l. De concentratie van 4-nonylfenol was lager dan 0,5 µg/l. Na analyse van drinkwater afkomstig van de Maas en de Rijn in Nederland werden atrazine (0,04-0,067 µg/l), bis(2-ethyl-hexyl)ftalaat (0,03-0,09 µg/l), di-n-butylftalaat (0,01-0,2 µg/l), diethylftalaat (1-<10 µg/l), pentachlorofenol (<10 µg/l), 4-nonylfenol (0,1-1 µg/l) en styreen (0,01-0,1 µg/l) aangetroffen (Denneman et al., 1998). Concentraties van (potentieel) endocrien verstorende stoffen in het drinkwater zijn dus in veel gevallen lager dan of schommelen rond de drinkwaternorm. Wegens de complexiteit van de werkingsmechanismen betrokken bij endocriene verstoring en de (zeer) lage concentraties waarbij sommige stoffen actief zijn, is deze norm echter niet representatief m.b.t. endocrien verstorende stoffen.

5.7 Bronnen, effecten en voorkomen van (potentieel) endocrien verstorende stoffen in de Noordzee

5.7.1 Organochloorverbindingen

ATRAZINE

Atrazine wordt vooral gebruikt als herbicide voor de bestrijding van éénjarige onkruiden in de maïs-, asperge-, schorseneren- en fruitteelt. Sinds augustus 1991 is het gebruik als totaal herbicide verboden (MNZ, 1995). Het commercieel gebruik van atrazine werd in Denemarken, Zweden, Noorwegen en Duitsland stopgezet in de periode 1985-'95. In België, Nederland, Zwitserland en Groot-Brittannië werd het gebruik beperkt (Andersen en Niilonen, 1995). Een belangrijke bron van atrazine in de Noordzee is de aanvoer via rivieren en oppervlaktewateren (Bester en Hühnerfuss, 1993; Gough et al., 1994; Zhou et al., 1996). De geschatte input van atrazine in het oppervlakte van de Noordzeestaten bedroeg in 1995 7 tot 9 ton (Andersen en Niilonen, 1995). De gemeten concentraties van atrazine in de Noordzee zijn zeer variabel en bedragen minder dan 0,05 voor België (NSTF, 1993), 0,005 tot 0,012 µg/l langs de kusten van Engeland (Gough et al., 1994) en maximaal 0,1 µg/l voor Duitsland. De hoge concentraties voor de Duitse kust zijn afkomstig van de Elbe die veel run off water van vervuilde gronden aanvoert (Bester en Hühnerfuss, 1993). Gemeten concentraties van atrazine in de Noordzee zijn weergegeven in Appendix I.

Endocrien verstorende activiteit van atrazine is aangetoond in zowel *in vitro* als *in vivo* laboratoriumstudies (gisttest, rat, alligator), maar de effectconcentraties lagen meerdere grootte-ordes boven de gemeten concentraties in de Noordzee (zie database). Op basis van deze gegevens lijkt de kans dat atrazine endocriene effecten veroorzaakt in mariene ecosystemen klein. Er dient echter opgemerkt te worden dat studies met mariene organismen (vertebraten en invertebraten) niet gekend zijn waardoor sluitende conclusies niet geformuleerd kunnen worden.

CHLORDAAN

Chlordaan is een niet-systemisch contact- en maaginsecticide met een licht ontsmettende werking. Daarnaast wordt chlordaan gebruikt als acaricide, pesticide en houtbeschermingsmiddel, ter controle van termieten en bescherming van ondergrondse kabels. Er bestaan twee isomeren (*cis* en *trans*) welke beide voorkomen in technische mengsels. Chlordaan is vrij persistent in het aquatisch milieu en accumuleert in sedimenten en biota (Keith, 1997). Er zijn geen gegevens over de concentraties van chlordaan in de Noordzee, maar deze stof is echter wel aangetroffen in het onderhuids vetweefsel van potvissen (*Physeter macrocephalus*) (0,98 tot 2,8 mg/kg vet) aangespoeld aan de Nederlandse, Franse en Britse kust en witflankdolfijnen (*Lagenorhynchus acutus*) (2 tot 12 mg/kg vers gewicht) aangespoeld langs de Schotse kust. De aanwezigheid van chlordaan in deze organismen wijst op een wijd verspreide vervuiling van de Noord-Oost-Atlantische Oceaan. (Law et al., 1997; McKenzie et al., 1997) (Appendix II).

Chlordaan interageert met de progesteronreceptor bij konijnen, kippen, eenden en de mens (zwak), de oestrogeenreceptor bij de muis en de mens (zwak) en de humane androgeenreceptor. Bij de schildpad *Trachemys scripta* werd na blootstelling *in ovo* een seksverandering van mannelijke naar vrouwelijke organismen waargenomen (zie database). Effecten bij andere mariene vertebraten en invertebraten zijn niet gekend waardoor een risico-evaluatie van chlordaan voor mariene ecosystemen niet mogelijk is.

DDT EN METABOLIETEN

DDT werd massaal gebruikt tijdens WO II ter bestrijding van o.a. malaria en tyfus. Na de oorlog werd DDT intensief gebruikt voor gewasbescherming in de landbouw en eveneens voor de bestrijding van ziekte-overdragende vectoren (vooral de malariamug). Daarnaast werd DDT ook toegepast in de schapen- en kippenteelt. Het gebruik van DDT verminderde sterk tijdens de jaren ’60, hoewel het tussen 1970 en begin 1980 toch nog vrij intensief toegepast werd. Het gebruik van DDT is verboden sinds 1972 in de Vereningde Staten en sinsdien is het gebruik eveneens verboden of beperkt in 68 andere landen. In Europa werd een verbod opgelegd sinds 1979. In sommige Tropische regio’s wordt DDT echter nog gebruikt

voor de bestrijding van de malariamug. DDT wordt vooral geadsorbeerd aan bodems, organisch materiaal en sedimenten en bioconcentreert en biomagnificeert in verschillende ecosystemen. Als gevolg van de zeer persistente en vrij vluchtige eigenschappen van DDT blijft het zeer lang in milieu aanwezig en raakt het via de atmosfeer algemeen verspreid (tot op de Noordpool). Bovendien is DDE, een belangrijke metaboliet van DDT, eveneens algemeen verspreid in het milieu (Euro Chlor, 1999).

DDT en zijn metabolieten DDE en DDD kunnen interfereren met de geslachtshormonen ((anti-)oestrogeen, (anti-)androgeen, (anti-)progestageen) van organismen op verschillende taxonomische niveaus. Naast effecten op de geslachtshormonen induceert p,p'-DDT hypothyroïdisme bij de duif en interfereert (*in vitro*) met het corticosteroïdmetabolisme bij muizen en regenboogforel. *In vitro* testen toonden een (zwakke) interactie aan tussen o,p'-DDT en o,p'-DDD en de menselijke thyroïdreceptor en o,p'-DDD inhibeert eveneens de binding van thyroxine met het thyroïd bindend globuline. Bij mariene organismen zijn een daling van de testosteronespiegel bij de bruinvis van Dall en binding met de 20β-S receptor op de membraan van de oöcyten van de gevlekte zeeforel (*Cynoscion nebulosus*) en de spermatocyten van de ombervis (*Micropogonias undulatus*) waargenomen. Bij Californische meeuwen (*Larus californicus*) werd een vervrouwelijking waargenomen na blootstelling *in ovo* (zie database).

Gemeten waarden van de totale DDT (DDE, DDD, DDT) concentraties in het Schelde-estuarium bedroegen 1-13 µg/kg (Appendix I). In weefsels van verschillende mariene zoogdieren, vissen en vogels werden concentraties DDT, DDE en DDD gemeten die mogelijks geassocieerd kunnen worden met endocrien verstorende effecten (Appendix II). Tussen 1950 en 1975 werd een drastische daling van de zeehondenpopulatie in de Baltische Zee en het westelijk gedeelte van de Waddenzee waargenomen. Deze gebieden waren (zijn) sterk vervuild met vooral organochloorverbindingen zoals DDT en metabolieten en PCB's (Jensen en Jansson, 1979; Reijnders, 1986). Bovendien toonden Jensen en Jansson (1979) een correlatie aan tussen weefselconcentraties van DDT en PCB's en reproductieproblemen.

Op basis van deze gegevens kan gesteld worden dat ondanks het verbod in vele landen en de drastische vermindering van het gebruik van DDT wereldwijd, DDT en zijn metabolieten mede als gevolg van hun persistent karakter en mogelijkheid tot bio-accumulatie en biomagnificatie nog steeds een potentieel risico vormen voor mariene ecosystemen.

DIELDRIN

Dieldrin is een niet-systemisch contact- en maaginsecticide dat wordt gebruikt voor de bestrijding van termieten en de behandeling van zaaigoed en planten. Op

industriële schaal wordt dieldrin toegepast als houtbeschermingsmiddel en voor de bescherming van kabels en constructiemateriaal. Dieldrin is persistent en absorbeert sterk aan sedimenten en bio-accumuleert in biota (Keith, 1997).

In de literatuur bestaan een aantal discrepanties over een mogelijke endocrien verstorende aktiviteit van dieldrin. Toch werd in een epidemiologische studie een correlatie aangetoond tussen concentraties aan dieldrin in menselijk bloed (mediaan: 24,5 ng/bloed) en een verhoogd risico op borstkanker. Bij vissen werd een daling in de productie van 'gonadotropin releasing hormones' door de hypofyse aangetoond (zie database).

In sedimenten afkomstig uit de Noordzee en het Schelde-estuarium zijn concentraties gemeten van respectievelijk 7 tot 810 mg/kg drooggewicht en 1 tot 2 mg/kg (Appendix I). In de lever van schar (*Limanda limanda*) en kabeljauw (*Gadus morhua*) uit de Noordzee zijn concentraties aangetroffen van respectievelijk 0,1 en 0,2 mg/kg vet en eieren van aalscholvers (*Phalacrocorax carbo sinensis*) en kokmeeuwen (*Larus ridibundus*) bevatten respectievelijk 0,1 mg/kg vers gewicht en 78 tot 1000 mg/kg vet (NSTF, 1993; Dirksen et al., 1995; Stronkhorst et al., 1993). De concentraties dieldrin in mariene zoogdieren liggen echter hoger. In het onderhuids vetweefsel van potvissen (*Physeter macrocephalus*) zijn concentraties aangetroffen van 0,2-0,45 mg/kg vers gewicht en 0,034-1,5 mg/kg vet (Law et al., 1996, 1997; Wells et al., 1997). Onderhuids vetweefsel van witflankdolfijnen (*Lagenorhynchus acutus*) bevatte 0,95 tot 4,7 mg/kg vers gewicht (McKenzie et al., 1997). In de grijze (*Halichoerus grypus*) en de gewone (*Phoca vitulina*) zeehond levend langs de kusten van Groot-Brittannië zijn concentraties gemeten van 0,16 tot 0,23 mg/kg vers gewicht (Law et al., 1989) (Appendix II).

Op basis van deze gegevens is het moeilijk om sluitende conclusies te formuleren omtrent de mogelijke effecten van dieldrin op het endocrien metabolisme van mariene organismen. Aangezien de concentraties in sommige organismen echter vrij hoog zijn, is het niet onrealistisch te postuleren dat endocriene verstoring in het marien milieu zich voordoet als gevolg van blootstelling aan dieldrin.

DIOXINES EN FURANEN

De voornaamste bronnen van dioxines naar het aquatisch milieu in Europa zijn de papier- en staalindustrie (Andersen en Niilonen, 1995). Het grootste gedeelte van de dioxine-uitstoot gaat rechtstreeks naar de lucht via de verbranding van huishoudelijk afval, ziekenhuisafval, industrieel afval, slib en stortgassen, verwarming van gebouwen, industriële stookinstallaties en electriciteitswinning uit steenkool, non-ferro industrie, ijzer- en staalindustrie, cement- en kalkovens, wegverkeer en branden. De rechtstreekse emissie van dioxines naar water is in België beperkt. Als belangrijkste emissiebron gelden de ijzer- en staalindustrie. Andere bronnen van dioxines naar water zijn de productie van chloorgas, loog en PVC, verbranding van

huishoudelijk afval en bluswater van branden (MNZ, 1995). Dioxines zijn opgenomen in de lijst van gevaarlijke stoffen van OSPAR waartegen prioritair actie moet worden genomen. M.a.w. tegen 2020 moeten alle lozingen en emissies stopgezet zijn zodat de concentraties in het marien milieu nihil worden of gelijk zijn aan de achtergrondwaarden (OSPAR, 2000). Als gevolg van hun stabiel en lipofiel karakter, blijven dioxines echter zeer persistent aanwezig in het milieu en kunnnen ze adsorberen aan organisch materiaal in de bodem en mariene sedimenten en bio-accumuleren en biomagnificeren in biota. Bovendien worden dioxines via de atmosfeer verspreid tot op zeer afgelegen gebieden zoals de Noordpool en de Zuidpool (Euro Chlor, 1999). Volgens Oehme en medewerkers (1996) kunnen echter enkel dioxines met chloorsubstituties op positie 2, 3, 7 en 8 accumuleren in zeehonden en andere hogere diersoorten.

Dioxines kunnen op diverse manieren interfereren met het endocrien systeem van verschillende diersoorten (zoogdieren, vogels, vissen). In de literatuur zijn effecten beschreven op het metabolisme van sekshormonen (oestrogenen, androgenen, progestagenen), gonadotrope hormonen, cortico-steroïden, thyroïd hormonen en retinoïd hormonen (zie database).

In de dooierzak van de visdief (*Sterna hirundo*) langs de Belgische en Nederlandse kust werden concentraties van 0,2 tot 1,6 µg/kg vet en 0,024 tot 0,35 µg/kg vers gewicht (som van dioxines en furanen) gemeten. De graad van besmetting vertoonde echter wel lokale verschillen. Kolonies uit het Rijn- en Maasbekken vertoonden meer contaminatie dan deze uit de Waddenzee en het Schelde-estuarium (Appendix II). Bovendien bleek de blootstelling aan dioxines en furanen niet gecorreleerd te zijn met het broedsucces van de kolonie, maar werd wel een concentratie-respons waargenomen op individueel niveau. Eieren die hogere concentraties dioxines en furanen bevatten, vertoonden een vertraagde ontluiking wat uiteindelijk wel kan leiden tot een verminderd broedsucces (Bosveld et al., 1995). De concentratie 2,3,7,8-tertachlorodibenzo-p-dioxine in onderhuids vetweefsel van bruinvissen (Phocoena phocoena) in Denemarken en Noorwegen bedroeg respectievelijk 0,065 tot 0,59 en 0,19 tot 0,64 ng/kg vet. Voor 1,2,3,7,8-pentachlorodibenzo-p-dioxine werden waarden gemeten van 0,32 tot 1,7 ng/kg vet (Denemarken) en 0,68 tot 2,4 ng/kg vet (Noorwegen) (Berggrena et al., 1999) (Appendix II). Hoewel de gemeten concentraties in deze organismen laag zijn, bestaat er wegens de persistentie en de neiging tot bio-accumulatie en biomagnificatie van deze verbindingen toch een potentieel risico voor mariene ecosystemen.

ENDOSULFAN

In België wordt endosulfan gebruikt als pesticide in de fruit-, groenten- en sierteelt. Daarnaast wordt endosulfan ook toegepast als houtbeschermingsmiddel

(MNZ, 1995). Het gebruik van werd stopgezet in Nederland en Noorwegen en neemt af in België en Frankrijk. De geschatte emissie van endosulfan naar het aquatisch milieu door de landen van de Noordzeeconferentie bedroeg in 1995 ongeveer 2,5 ton (Andersen en Niilonen, 1995). Endosulfan werd aangetroffen in de microfilm aan de oppervlakte van het zeewater wat wijst op een vermoedelijke persistentie in het marien milieu en transport en verspreiding over lange afstanden (Olea et al., 1999).

Over de endocrien verstorende activiteit van endosulfan en zijn isomeren endosulfan α en β bestaat nog geen sluitende zekerheid. Wel werd een oestrogene en/of anti-androgene werking aangetoond *in vitro*. *In vivo*-experimenten met vissen en de gewone mossel (*Mytilus edulis*) toonden een verstoorde reproductie, spermatogenese en oögenese aan (zie database). Gegevens over concentraties van endosulfan in mariene biota waren niet beschikbaar. Volgens MNZ (1995) bedraagt de concentratie van endosulfan in het aquatisch milieu ongeveer 0,025 nM (ongeveer 0,01 µg/l) (Appendix I). Deze waarde ligt ver beneden concentraties die een endocrien verstorend effect induceren in laboratoriumtesten. De risico's van endosulfan voor mariene ecosystemen m.b.t. endocriene verstoring is bijgevolg klein. Er dient echter opgemerkt te worden dat testen met representatieve mariene organismen ontbreken en dat het optreden van zogenaamde 'low dose effects' niet is uitgesloten.

HEXACHLOROCYCLOHEXAAN

De technische mengsels van hexachlorocyclohexaan (HCH) bestaan zowel uit α-HCH, β-HCH, γ-HCH en δ-HCH en zijn persistent in het milieu aanwezig. De meest toxische isomeer is γ-HCH of lindaan (Andersen en Niilonen, 1995). In België werd lindaan vooral gebruikt voor de bestrijding van bodeminsecten en als houtbeschermingsmiddel, maar ook voor de bestrijding van kruipende insecten (MNZ, 1995). De toepassing van lindaan is verboden in de landen van de Europese Unie en de Europese Economische Zone. In 1995 bedroeg de emissie van lindaan naar het aquatisch milieu ongeveer 1 ton (Andersen en Niilonen, 1995). Lindaan en isomeren zijn opgenomen in de lijst van OSPAR van gevaarlijke stoffen waartegen prioritair actie moet worden ondernomen (OSPAR, 2000).

De endocrien verstorende activiteit van lindaan blijkt zich vooral te manifesteren in een interferentie met de hersenen-lever-gonaden as. Een epidemiologische studie toonde een correlatie aan tussen de concentratie aan lindaan in het bloedserum en een stijging in de serum LH en FSH spiegels en een daling in het serum testosterongehalte bij mannen blootgesteld gedurende hun professionele activiteiten. Bij de Amerikaanse wezel (*Mustela vison*) werd na blootstelling aan lindaan een verminderde fertiliteit en een daling in de thyroxineconcentratie waargenomen. Bij schapen induceert lindaan een daling in de LH en thyroxineconcentraties en een stijging in de insuline- en oestradiolspiegels. Bij verschillende vissoorten (zoetwater)

interfereert lindaan met het metabolisme van de seks steroïden, gonadotrope en 'gonadotrope releasing' hormonen bij concentraties variërend van 0,01 tot 16 mg/l (zie database).

β-HCH vertoont een oestrogene activiteit bij verschillende zoetwatervissen en muizen. Bij vissen is bovendien de inductie van ovotestis aangetoond na blootstelling aan β-HCH. Bovendien bestaat een potentiële correlatie tussen de concentratie van β-HCH in het bloed en de kans op borstkanker bij vrouwen (zie database).

Voor δ-HCH werd *in vitro* een androgene of anti-oestrogene activiteit aangetoond (zie database). Over een eventuele endocrien verstorende activiteit van α-HCH werden geen gegevens gevonden.

De concentratie van lindaan in het water van de Noordzee is de hoogste van de verschillende HCH-isomeren, i.e. 1,8 tot 2,9 pg/l. Dit is waarschijnlijk een gevolg van het gebruik van gezuiverd lindaan na WO II in plaats van technische mengsels. Voor α-HCH en β-HCH werden concentraties gemeten van respectievelijk 0,35 tot 0,4 pg/l en 0,1 tot 0,2 pg/l (NSTF, 1993). Volgens MNZ (1995) bedraagt de geschatte concentratie lindaan in de Noordzee 0,01 µg/l. In sedimenten van het Schelde-estuarium zijn concentraties van 0,004 mg:kg aangetroffen (Appendix I). De concentratie van de verschillende HCH-isomeren in het onderhuids vetweefsel van mariene zoogdieren varieert van 4 tot 128, van <1 tot 9 en van <1 tot 954 µg/kg voor respectievelijk α-HCH, β-HCH en lindaan. In de lever van vissen levend in de Noordzee zijn concentraties aangetroffen van 12 tot 34 µg/kg vet voor α-HCH en 32 tot 82 µg/kg vet voor lindaan. Eieren van de kokmeeuw (*Larus ridibundus*) afkomstig uit het Schelde-estuarium bevatten lindaanconcentraties tot 1,2 g/kg vet (Appendix II).

De concentraties van lindaan en isomeren in het Noordzee-ecosysteem zijn dus, met uitzondering van de concentratie van lindaan in eieren van de kokmeeuw (*Larus ridibundus*), laag. Op basis van de gegevens over de endocrien verstorende activiteit van lindaan en andere HCH-isomeren, is het echter wetenschappelijk verantwoord deze stoffen als potentieel risico te beschouwen voor mogelijk endocrien verstorende effecten in organismen levend in en langs de kusten van de Noordzee.

PENTACHLOROFENOL

Pentachlorofenol (PCP) is een contactinsecticide met een niet-selectieve werking. Het gebruik van PCP is in België voor de meeste toepassingen verboden (MNZ, 1995). PCP is opgenomen in de lijst van OSPAR met gevaarlijke stoffen waartegen prioritair actie moet worden genomen. De geschatte input van PCP door de Noordzeestaten bedroeg in 1995 6 tot 9 ton (Andersen en Niilonen).

Binding van PCP met de oestrogeenreceptor (konijn), androgeenreceptor

(mens, rat) en progesteronreceptor (mens) is aangetoond m.b.v. *in vitro* experimenten. In de MCF-7 cell proliferation assay kon echter geen oestrogeen-afhankelijke celproliferatie geïnduceerd worden. *In vivo* experimenten met de Amerikaanse wezel en schapen toonden een verstoring aan van het thyroïdhormoonmetabolisme (daling van de thyroxineconcentratie in het bloedserum) (zie database).

De 'predicted environmental concentration (PEC)' in kustwateren en estuaria van de Noordzee variëren van 0,07 tot 0,79 µg/l voor de periode 1983-1991 en 0,01 tot 0,11 µg/l voor de periode 1992-1997. In sedimenten werden gemiddeld 26,5 µg/kg (1991-1994) en <10 µg/kg (1995-1997) aangetroffen (Euro Chlor, 1999) (Appendix II). Deze concentraties zijn beduidend lager dan de concentraties waarbij effecten zijn waargenomen. Gegevens over de aanwezigheid van PCP in biota uit de Noordzee werden niet gevonden.

Op basis van deze gegevens kan gesteld worden dat het risico dat PCP endocrien verstorende effecten veroorzaakt in het Noordzee-ecosysteem klein is. Toch dient ook hier opgemerkt te worden dat wegens het ontbreken van data met representatieve organismen en de mogelijkheid voor het optreden van 'low dose effects', enige voorzichtigheid geboden is omtrent het potentieel risico van PCP voor het Noordzee-ecosysteem.

POLYCHLOORBIFENYLEN

De polychloorbifenylen (PCB's) vormen een groep van verschillende verbindingen die verschillen in het aantal en de plaats van chloorsubstituties. Verbindingen met een verschillend aantal chlooratomen worden congeneren genoemd, deze met dezelfde graad van chlorering maar op verschillende plaatsen zijn isomeren. PCB's werden zeer veel gebruikt in de industrie (bijv. als transformatorolie). Het gebruik van PCB's is verboden in alle Noordzeestaten en ze zijn opgenomen op de OSPAR-lijst van stoffen waartegen prioritair actie moet worden ondernomen om de milieuconcentraties te reduceren tot nul. De degradatie van PCB's in het milieu is afhankelijk van de graad van chlorering (plaats en aantal), waarbij de persistentie stijgt met stijgend aantal chlooratomen. Als gevolg van deze persistentie en hun lipofiel karakter zullen PCB's bio-accumuleren in biota. Hoge bioconcentratiefactoren (tussen 100 000 en 300 000) en hoge octanol-water partitiecoëfficiënten (log Pow tussen 4,3 en 8,26) zijn waargenomen. Bovendien worden PCB's in het milieu over lange afstanden getransporteerd waardoor ze eveneens in de Poolgebieden aangetroffen worden (Andersen en Niilonen, 1995; Euro Chlor, 1999).

De endocrien verstorende activiteit van PCB's is afhankelijk van het aantal en de plaats van de chloorsubstituties. Bovendien vertonen gehydroxyleerde en gesulfoneerde metabolieten van PCB's eveneens een endocrien verstorende

activiteit. Daarenboven bezitten de metabolieten van bepaalde PCB's die zelf geen endocriene verstoring veroorzaken wel een endocrien verstorende activiteit. PCB's en metabolieten kunnen interfereren met het metabolisme van verschillende hormonen en met endocriene de mechanismen die gereguleerd worden door deze hormonen (seksteroïden, thyroïd hormonen, retinoïd hormonen). Hierdoor vormen de PCB's en hun metabolieten een zeer complexe groep van verbindingen m.b.t. de problematiek van de endocriene verstoring (zie database). De sterke daling van de zeehondenpopulatie in de Nederlandse Waddenzee als gevolg van verstoringen van de groei en de voortplanting en een daling van de immunologische weerstand tegen infecties blijkt geassocieerd met de PCB-contaminatie in hun habitat door interferentie van PCB's met het thyroïd en retinoïd hormoonmetabolisme (Brouwer et al., 1989).

De PCB-concentraties in de Noordzee variëren van 16 tot 29 pg/l, van 0,025 tot 1,3 mg/kg en 0,026 mg/kg voor respectievelijk water, sedimenten en zwevende stof (Appendix I). In mariene zoogdieren, vissen in de Noordzee en vogels levend langs de kusten van de Noordzee zijn uiteenlopende weefselconcentraties van PCB's gemeten. Hoe hoger het organisme zich in de voedselketen bevindt, des te hoger is de graad van PCB-contaminatie (Appendix II).

Op basis van bovenvermelde gegevens kan besloten worden dat bepaalde PCB's en hun metabolieten een reëel risico zijn voor het Noordzee-ecosysteem en het marien milieu in het algemeen.

TOXAFEEN

Toxafeen is een mengsel van gechloreerde camfenen en werd tot midden de jaren 1980 als insecticide toegepast. In de Verenigde Staten, Canada en West-Europa is het gebruik verboden, maar toxafeen wordt echter nog steeds toegepast in Zuid-Amerika, Afrika, Oost-Europa en Azië. Via lange afstandtransport wordt toxafeen mondiaal verspreid en kan het accumuleren in de lokale fauna (Jorgensen et al., 1997; Oehme et al., 1996).

Het is nog niet volledig duidelijk of toxafeen een endocrien verstorende activiteit bezit. Een aantal *in vitro* experimenten tonen een interactie aan van toxafeen met de menselijke oestrogeen-, androgeen-, progesteron- en retinoïd hormoonreceptor en de oestrogeenreceptor van de alligator (*Alligator mississipiensis*). *In vivo* experimenten met kippen en ratten duiden op een anti-oestrogene activiteit bij concentraties van respectievelijk 121 mg/kg/dag en 25 mg/kg/dag (zie database).

Toxafeen werd aangetroffen in verschillende organismen levend in de Noordzee. In spierweefsel en lever van vissen werd 0,1 tot 0,4 mg toxafeen per kg vet gemeten, terwijl in het onderhuids vetweefsel van de bruinvis (*Phocoena phocoena*) en de witsnuitdolfijn (*Lagenorhynchus albirostris*) respectievelijk 8,7 en 27 mg/kg vet werden gedetecteerd (Appendix II). De hogere concentraties in mariene

zoogdieren wijst op een bio-accumulatie van toxafeen in de voedselketen.

Uit bovenstaande gegevens is het niet mogelijk om in te schatten of toxafeen een risico is voor het optreden van endocriene verstoring in de Noordzee.

NONACHLOR

Nanochlor is een component van technisch toxafeen en komt voor als een cis- en een trans-isomeer. Beide isomeren veroorzaken een seksverandering van mannelijk naar vrouwelijk bij de schildpad *Trachemys scripta* na incubatie van de eieren bij temperaturen die normaal tot de differentiatie van mannelijke organismen leiden. Bij de alligator (*Alligator mississipiensis*) is een daling van de testosteronspiegel in het bloed waargenomen na blootstelling aan trans-nonachlor. *In vitro* experimenten tonen een interactie aan van nonachlor met de humane oestrogeenreceptor en de oestrogeenreceptor van de alligator (*Alligator mississipiensis*) (zie database).

In het onderhuids vetweefsel van de witflankdolfijn (*Lagenorhynchus acutus*) en de potvis (*Physeter macrocephalus*) werden respectievelijk 1,1 tot 9,5 en 0,4 tot 1 mg nonachlor per kg vers gewicht gemeten (Appendix II).

Deze gegevens zijn ontoereikend om sluitende conclusies te formuleren omtrent het potentieel risico van nonachlor om endocriene verstoring te veroorzaken in het Noordzee-ecosysteem.

5.7.2 Alkylfenolen en alkylfenolpolyethoxylaten

Alkylfenolpolyethoxylaten (APE's) zijn anionische surfactanten die onder andere gebruikt worden als industriële detergenten, in verven, cosmetica en op off-shore installaties. Via deze off-shore installaties, industriële lozingen, rioolwaterzuiveringsinstallatie en run-off komen APE in grote hoeveelheden al dan niet zonder voorbehandeling in het aquatisch milieu terecht. Via afbraak in het milieu en gedurende de behandeling van afvalwater (o.a. microbiële degradatie en fotodegradatie) worden alkylfenolen (AP's) gevormd (Blackburn et al., 1999). APE's en AP's worden als prioritair beschouwd door OSPAR om hun concentraties in het marien milieu tegen 2020 te reduceren tot nul (OSPAR, 2000).

NONYLFENOL

In vivo en *in vitro* experimenten met zoogdieren, vissen en amfibieën hebben een oestrogene activiteit aangetoond van (4-)nonylfenol. Daarnaast blijkt 4-nonylfenol *in vitro* te interageren met de androgeen- en progesteronreceptor. Ook bij invertebraten zijn een aantal effecten waargenomen die mogelijk gelinkt kunnen worden met het endocrien systeem. Bij *Daphnia magna* is een daling van de metabolische eliminatie van testosteron en een verminderde fecunditeit waargenomen na blootstelling aan 4-nonylfenol. Bij *Corophium volutator* werd een

verhoogde fertiliteit en een verandering in de mannelijke secundaire geslachtskenmerken aangetoond. In de zeepok *Balanus amphitrite* wordt de synthese van het 'cypric major protein', een eiwit dat structureel verwant is met vitelline en vitellogenine, geïnduceerd door 4-nonylfenol. Een zeer opmerkelijke vaststelling is het optreden van imposeks bij de purperslak *Nucella lapilus* na blootstelling aan nonylfenol (zie database).

In water en sedimenten van estuaria in Engeland zijn concentraties van nonylfenol gemeten van respectievelijk < 0,2 tot 5,8 µg/l en < 0,1 tot 1,7 mg/kg sediment (Appendix I). Gegevens over concentraties van nonylfenol in biota waren niet beschikbaar.

Op basis van bovenstaande gegevens kan geconcludeerd worden dat (4-) nonylfenol een reëel risico is voor het optreden van endocrien verstorende effecten in het Noordzee)ecosysteem en het marien milieu in het algemeen.

OCTYLFENOL

De effecten van (4-tert-)octylfenol zijn gelijkaardig aan deze van (4-) nonylfenol (zie database). In sedimenten van de Schelde zijn concentraties octylfenol gemeten van 20 µg/kg (Appendix I). Gegevens over concentraties van (4-tert-) octylfenol in mariene biota waren niet beschikbaar. Uitgaande van de gegevens van (4-)nonylfenol kan besloten worden dat ook (4-tert-)octylfenol een potentieel risico is voor het optreden van endocriene verstoring in het marien milieu.

ALKYLFENOLPOLYETHOXYLATEN

De oestrogene activiteit van APE's daalt met de lengte van ethoxylaatketen. Voor 4-nonylfenoldiethoxylaat, 4-nonylfenoldodecylethoxylate en 4-nonylfenolcarboxylzuur is *in vitro* een oestrogene activiteit aangetoond (zie database).

In water en sedimenten van estuaria in Engeland zijn concentraties van nonylfenolethoxylaat en nonylfenoldiethoxylaat (som van beide) gemeten van respectievelijk < 0,6 tot 76 µg/l en < 0,5 tot 3,6 mg/kg sediment. In sedimenten van de Schelde zijn concentraties nonylfenolethoxylaat gedetecteerd van 300 µg/kg (Appendix I). Gegevens over concentraties van alkylfenolpolyethoxylaten in biota waren niet beschikbaar.

Deze verbindingen zijn eveneens een potentieel risico voor het optreden van endocriene verstoring in het marien milieu.

5.7.3 Polyaromatische koolwaterstoffen

Polyaromatische koolwaterstoffen (PAK's) worden vrijgesteld bij de verbranding van fossiele brandstoffen, olielekken, emissies van off-shore installaties en uitlaatgassen van schepen. PAK's accumuleren in sedimenten, maar worden vrij snel gemetaboliseerd en geëlimineerd door vissen en andere vertebraten waardoor

ze minder accumuleren in biota. PAK zijn opgenomen op de OSPAR-lijst van gevaarlijke stoffen waartegen prioritair actie moet worden ondernomen (OSPAR, 2000).

Tabel X geeft een overzicht van de endocrien verstorende activiteit van verschillende PAK's. Met uitzondering van naftaleen (*in vivo* oestrogene activiteit in de bot *Platichthys flesus*), zijn deze activiteiten bepaald in *in vitro* modellen. Pyreen heeft bovendien een effect op de vervelling en seksuele maturatie van mannelijke *Palaemontes pugio* (grass shrimp) en induceert de synthese van vitelline in vrouwelijke *P. Pugio*. Voor benzo[ghi]peryleen en fluoreen zijn geen bewijzen van een eventuele endocriene activiteit (zie database).

Tabel X: Endocrien verstorende activiteit van polyaromatische koolwaterstoffen

PAK	Oestrogeen	Anti-oestrogeen	Androgeen	Anti-androgeen
Indeno[1,2,3-cd]pyreen		+		
Benzo[b]fluorantheen		+		
Benzo[k]fluorantheen		+		
Benzo[a]pyreen	+	+		+
Fluorantheen				+
Phenanthreen				+
Anthraceen		+		+
Pyreen				+
Nafthaleen	+			
Benz[a]anthraceen	+	+		
Chryseen	+	+		+
Dibenz[a,h]anthraceen		+	+	

In sedimenten en zwevende stof afkomstig van estuaria in Nederland en Engeland en van de Noordzee zijn PAK-concentraties gemeten variërend van 0,054 tot 3,05 mg/kg. Sedimenten afkomstig van de Waddenzee en het Schelde-estuarium bevatten respectievelijk 0,218 en 6,08 mg PAK's per kg sediment In water van estuaria en kustgebieden van de Noordzee werden totale PAK-concentraties gemeten tot 8,5 µg/l (Appendix I).

Het is niet zeker of PAK's endocriene verstoring veroorzaken in de Noordzee. Effecten zijn afhankelijk van de aanwezige PAK-verbindingen en de concentraties waaraan de biota worden blootgesteld. Vermits PAK's relatief snel gemetaboliseerd en geëlimineerd worden, zal de bio-accumulatie gering zijn waardoor het risico

verminderd. De gemeten concentraties in sedimenten zijn echter hoog en ook hier moet opgemerkt worden dat het optreden van eventuele ‘low dose effects’ het mogelijke risico voor endocriene verstoring in de Noordzee als gevolg van blootstelling aan PAK’s niet onrealistisch is.

5.7.4 Organotinverbindingen

Organotinverbindingen worden wegens hun biocidale werking gebruikt in aangroeiwerende verven (bijv. tributyltin (TBT) en in mindere mate trifenyltin (TPT)), in herbiciden (bijv. TPT), in fungiciden en in houtbeschermingsmiddelen (bijv. TBT). Di- (DBT) en monobutyltin (MBT) zijn metabolieten van TBT en worden gebruikt als stabilisatoren in PVC en als catalysatoren voor polyurethaanschuim en siliconen (Tanabe, 1999). Vooral het gebruik van TBT-houdende verven op schepen en ondergedompelde structuren als aangroeiwerend middel is een belangrijke bron van contaminatie naar het aquatisch milieu. Er is een significante correlatie tussen de intensiteit van de scheepvaart en de concentratie TBT in biota en sedimenten. De organotinverbindingen zijn opgenomen op de lijst van OSPAR waartegen prioritair actie moet worden ondernomen. Het doel is het gebruik van TBT tegen 2003 volledig te verbieden en tegen 2008 te verplichten om TBT te verwijderen van scheepsrompen. In landen waar reeds restricties ingevoerd werden, werd een daling van de TBT-concentraties in en een biologisch herstel van de ecosystemen waargenomen (OSPAR, 2000). De geschatte emissie van TBT naar het aquatisch milieu door de landen van de Noordzeeconferentie bedroeg in 1995 ongeveer 62 ton (Andersen en Niilonen, 1995). De endocriene effecten veroorzaakt door tributyltinverbindingen worden geïnduceerd via eenzelfde werkingsmechanisme. De toxicologisch actieve component is het TBT-kation, terwijl de anionische rest geen significante invloed heeft op de endocrien verstorende activiteit (WHO, 1990; Fent, 1996). Tetrabutyltin wordt via het ‘mixed function oxygenase’ systeem in vertebraten en invertebraten gedebutyleerd tot TBT en vertoont dus een endocrien verstorende activiteit gelijkaardig aan TBT (Livingstone et al., 1990; Fent en stegeman, 1991).

TBT induceert imposeks en interseks bij marine gastropoden (bijv. de purperslak *Nucella lapilus*, de wulk *Buccinum undatum* en de alikruik *Littorina littorea*) via interferentie met het testosteronmetabolisme en is daardoor mede de oorzaak van het volledig verdwijnen van bepaalde slakkenpopulaties langs de kusten van de Noordzee. Ook in andere mollusken (bijv. de mossel *Ruditapes decussata*) en in crustaceeën (bijv. de blauwe krab *Callinectes sapidus*) veroorzaakt blootstelling aan TBT een verandering in het testosteronmetabolisme. Bovendien zijn bij bepaalde mollusken, crustaceeën en echinodermen een verstoorde reproductie en gonadale ontwikkeling waargenomen. TPT kan imposeks veroorzaken bij de in Azië levende gastropode *Thais clavigera*. Er zijn echter geen bewijzen dat TPT eveneens imposeks induceert in de nauw verwante Europese gastropoden zoals de purperslak

Nucella lapilus (zie database). In tegenstelling tot de duidelijke bewijzen van organotin-geïnduceerde endocriene verstoring bij invertebraten, werden nog geen effecten van organotinverbindingen op de hormoonhuishouding van vertebraten vastgesteld

Concentraties in water en sedimenten afkomstig van verschillende regio's in de Noordzee bedroegen respectievelijk 0,1 tot 160 ng/l en 26 ng/kg drooggewicht tot 895 µg/kg drooggewicht voor TBT, 0,1 tot 132,6 ng/l en 11,2 ng/kg drooggewicht tot 10 µg/kg drooggewicht voor DBT en 0,1 tot 91 ng/l en 11 ng/kg drooggewicht tot 10 µg/kg drooggewicht voor MBT (Appendix I). In spierweefsel van de makreel (*Scomber scombrus*) uit de Noordzee zijn TBT-concentraties gemeten van 27 µg/kg vers gewicht. In de lever van mariene zoogdieren zijn concentraties aangetroffen van respectievelijk < 3 tot 180 µg/kg vers gewicht voor TBT, 13 tot 460 µg/kg vers gewicht voor DBT en 3 tot 390 µg/kg vers gewicht voor MBT (Appendix II).

Organotinverbindingen en in het bijzonder TBT-verbindingen zijn een zeer groot risico voor het optreden van effecten van endocriene verstoring in het Noordzee-ecosysteem en het marien milieu in het algemeen. Bovendien zijn deze effecten waarneembaar op populatieniveau wat tot het verdwijnen van bepaalde soorten levend in de Noordzee heeft geleid. Het gebruik en de verspreiding van organotinhoudende producten moet derhalve zo snel mogelijk verboden worden.

5.7.5 Metalen

CADMIUM

Emissiebronnen van cadmium naar het aquatisch milieu zijn de non-ferro industrie, de fosfaat nijverheid, de ijzer- en staalindustrie en de cadmiumverwerking (MNZ, 1995). In 1995 werd naar schatting 30 ton cadmium in het aquatisch milieu geloosd door de Noordzeelanden (Andersen en Niilonen, 1995). De cadmiumconcentratie in de Noordzee zou tegen 2020 tot de achtergrondconcentratie (0,004-0,011 µg/l) moeten gereduceerd worden (NSTF, 1993).

Bij de mens is een correlatie vastgesteld tussen de concentratie van cadmium in het bloed en respectievelijk een stijging van de LH-, testosteron- en 'thyrotropin releasing hormone' concentratie en een daling van de prolactine- en thyroxineconcentratie. Bovendien werden afwijkingen waargenomen van de morfologie en motiliteit van het sperma. Cadmium interfereert met het metabolisme van testosteron, FSH en LH en met de secretie van serotin en norepinephrine door de hypothalamus bij ratten en met het corticosteroïdmetabolisme bij de regenboogforel (zie database).

In water, zwevende stof en sedimenten uit de Noordzee zijn cadmiumconcentraties gemeten van respectievelijk 0,02 tot 0,05 µg/l, 0,72 mg/kg drooggewicht en 0,05 tot 1,5 mg/kg drooggewicht. In water, zwevende stoffen en

sedimenten uit de Westerschelde zijn concentraties gedetecteerd van respectievelijk 0,15 µg/l, 2,2 mg/kg drooggewicht en 0,8 tot 4,7 mg/kg drooggewicht (Appendix I). De lever van vissen uit regio's van de Noordzee bevatte 0,06 tot 0,42 mg cadmium per kg. In de lever van potvissen (*Physeter macrocephalus*) werden concentraties gemeten van 30 mg/kg vers gewicht (Appendix II).

Uit bovenstaande gegevens kan besloten worden dat cadmium een potentieel risico is voor het optreden van endocriene verstoring in het Noordzee-ecosysteem.

KWIK

De emissie van kwik naar water zijn vooral afkomstig van tandartspraktijken (bijna 2 ton in 1995) (MNZ, 1995). De totale emissie van kwik naar het aquatisch milieu door de Noordzeelanden bedroeg in 1995 ongeveer 15 ton (Andersen en Niilonen, 1995).

In veldstudies werden bij de Florida panter (*Felis concolor coryi*) verstoringen van de thyroïdfunctie waargenomen. Bij de mens is een positieve correlatie tussen de concentratie van kwik in het haar en het optreden van subfertiliteit vastgesteld. Bij de regenboogforel (*Oncorhynchus mykiss*) werd *in vitro* een daling van de cortisolsecretie door de bijniercellen aangetoond (zie database).

In water, zwevende stof en sedimenten uit de Noordzee zijn concentraties van kwik gemeten van respectievelijk 0,4 tot 70 ng/l, 0,36 mg/kg drooggewicht en 0,1-0,75 mg/kg drooggewicht. Zwevende stoffen uit de Westerschelde bevatten 0,75 mg kwik per kg drooggewicht (Appendix I). In Appendix II wordt een overzicht gegeven van kwikconcentraties in de lever, spierweefsel en nieren van mariene vissen, vogels en zoogdieren.

De mogelijkheid dat kwik endocriene verstoring veroorzaakt in het Noordzee-ecosysteem is niet onrealistisch. Meer onderzoek met o.a. representatieve organismen is echter noodzakelijk om sluitende conclusies te formuleren.

ZINK

In 1995 werd door de Noordzeestaten ongeveer 6600 ton zink geloosd naar het aquatisch milieu (Andersen en Niilonen, 1995).

Bij de mens werd een correlatie vastgesteld tussen de zinkconcentratie in het bloed en een stijging van de motiliteit en levensvatbaarheid van het sperma en het aantal aantal spermatozoa. Bovendien werd een toename van het geboortegewicht waargenomen bij stijgende zinkconcentraties in de placenta. De biologische en fysiologische gevolgen van deze effecten is nog onduidelijk (zie database).

In water, zwevende stof en sedimenten uit de Noordzee zijn concentraties van zink gemeten van respectievelijk 1,62-1,73 µg/l, 174,3 mg/kg drooggewicht en 60-200 mg/kg drooggewicht. Sedimenten en zwevende stoffen uit de Westerschelde bevatten respectievelijk 250 tot 600 en 263,9 mg zink per kg drooggewicht (Appendix

I). In eieren van de visdief (*Sterna hirundo*) uit het Schelde-estuarium en in de lever van de potvis *(Physeter macrocephalus*) werden respectievelijk 12,19 tot 15,78 mg en 34 mg zink per kg vers gewicht gemeten (Appendix II).

Het is zeer onwaarschijnlijk dat zink endocriene verstoring veroorzaakt in het marien milieu.

KOPER

Bij de mens werd voor koper een negatieve correlatie waargenomen tussen de concentratie aan koper in het bloed en de motiliteit en leefbaarheid van het sperma en een negatieve correlatie tussen de koperconcentratie in de placenta en het geboortegewicht (zie database).

In water, zwevende stof en sedimenten uit de Noordzee zijn concentraties van koper gemeten van respectievelijk 0,3-1 µg/l, 19,6 mg/kg drooggewicht en 30-75 mg/kg drooggewicht. In water en zwevende stoffen van de Westerschelde zijn concentraties gedetecteerd van respectievelijk 2 µg/l en 40,8 mg/kg drooggewicht (Appendix I).

Op basis van deze gegevens is het onmogelijk om conclusies te formuleren omtrent het risico voor endocriene verstoring in het Noordzee-ecosysteem als gevolg van blootstelling aan koper.

LOOD

Lood wordt bij de mens geassocieerd met een stijging van de serum testosteron- en oestradiolspiegel, een daling van het aantal en morfologische afwijkingen van de spermatozoa en een daling van de motiliteit en leefbaarheid van het sperma. Bij de rat is *in vitro* een daling van de affiniteit van glucocorticoïd voor zijn receptor waargenomen (zie database).

In water, zwevende stof en sedimenten uit de Noordzee zijn concentraties van lood gemeten van respectievelijk 0,03-0,12 µg/l, 58,2 mg/kg drooggewicht en 25-80 mg/kg drooggewicht. In water en zwevende stoffen van de Westerschelde zijn concentraties gedetecteerd van respectievelijk 12 µg/l en 82,4 mg/kg drooggewicht (Appendix I).

Op basis van deze gegevens is het onmogelijk om conclusies te formuleren omtrent het risico voor endocriene verstoring in het Noordzee-ecosysteem als gevolg van blootstelling aan lood.

5.7.6 Ftalaten

Ftalaten worden vooral gebruikt als weekmakers in plastics, maar worden eveneens gebruikt voor industriële, landbouwkundige en huishoudelijke toepassingen. De meeste ftalaten worden o.a. gebruikt in de productie van PVC. De massale productie wereldwijd (enkele miljoenen ton per jaar) en de fysische in plaats van chemische incorporatie in polymeren, zorgen ervoor dat deze verbindingen

algemeen verspreid geraken in het milieu via afvalwatereffluenten tijdens de productie en via uitloging en vervluchtiging uit plastics (Turner en Rawlings, 2000). Ftalaten worden snel gehydrolyseerd door zoogdieren en vissen waardoor de systemische blootstelling aan ftalaten eerder gering is (Moore, 2000). Dibutylftalaat (DBP) en di-2-ethylhexylftalaat (DEHP) staan op de OSPAR-lijst van gevaarlijke stoffen waarvan de concentratie in het milieu tegen 2020 tot nul moet herleid worden.

De endocrien verstorende activiteit van ftalaten is afhankelijk van de verbinding. Voor een aantal is een oestrogene en/of anti-androgene activiteit aangetoond, hoewel er toch een aantal discrepanties bestaan tussen de resultaten van verschillende testmodellen. In een epidemiologische studie met arbeiders die tijdens hun professionele activiteiten blootgesteld werden aan PVC, werd een correlatie aangetoond tussen blootstelling aan PVC en een verhoogd risico voor testiskanker. Vooral de aanwezigheid van DEHP in PVC zou hiertoe bijdragen. Bij de rat zijn atrofie van de testis en een verstoorde spermatogenese waargenomen na blootstelling aan DEHP (zie database).

In water, zwevende stof en sedimenten van Noordzee-estuaria zijn DEHP-concentraties gemeten van respectievelijk < 0,1 tot 0,69 µg/l, 0,28 tot 25 mg/kg en 1,2 mg/kg. In kustgebieden van de Noordzee zijn concentraties gedetecteerd van 0,025 tot 2,2 µg DEHP per liter water en 0,045 tot 0,22 mg DEHP per kg sediment (Appendix I).

Deze gegevens zijn ontoereikend om sluitende conclusies te formuleren over het potentieel risico dat ftalaten endocriene verstoring veroorzaken in het Noordzee-ecosysteem. Wegens de snelle biodegradatie door hogere organismen is de kans dat effectief effecten zullen optreden echter klein. Toch moet ook hier opgemerkt worden dat de mogelijkheid voor het optreden van ‘low dose effects’ verder onderzocht moet worden.

5.7.7 Trichloorethyleen

Trichloorethyleen wordt vooral gebruikt als ontvetting- en reinigingsmiddel voor metalen onderdelen. In 1995 bedroeg het verbruik van trichloorethyleen in de EU ongeveer 110 000 ton (Euro Chlor, 1999).

Een epidemiologische studie toonde effecten aan van blootstelling aan trichloorethyleen tijdens professionele activiteiten op het testosteron- en insulinemetabolisme.

In estuaria langs de Britse, Duitse, Franse, Nederlandse en Belgische kust zijn trichloorethyleenconcentraties gemeten van 0,0013 tot 3,5 µg/l. In de open Noordzee werden concentraties gedetecteerd van < 0,005 µg/l (Appendix I).

Deze gegevens zijn onvoldoende om het risico van trichloorethyleen om endocriene verstoring te veroorzaken in de Noordzee in te schatten.

5.7.8 Hexachloorbenzeen

D.m.v. verschillende zoogdiermodellen (rat, muis, hamster, varken) is een interferentie aangetoond van hexachloorbenzeen met het metabolisme van testosteron, thyroïd hormonen en retinoïd hormonen. Bovendien werden een verminderde fertiliteit, een vertraagde ontwikkeling van de testes en thyroïd tumoren waargenomen na blootstelling aan hexachloorbenzeen. Bij de mens is een negatieve correlatie aangetoond tussen de concentratie van hexachloorbenzeen in moedermelk en het geboortegewicht (zie database).

In sedimenten van het Schelde-estuarium zijn concentraties hexachloorbenzeen aangetroffen van 0,3 tot 5,3 µg/kg (Appendix I).

Deze gegevens zijn onvoldoende om het risico van hexachloorbenzeen om endocriene verstoring te veroorzaken in de Noordzee-ecosysteem in te schatten.

5.7.9 Identificatie van risicostoffen

Hoewel wegens een gebrek aan informatie geen echte risicoschatting uitgevoerd kon worden, kunnen op basis van bovenstaande informatie toch een aantal stoffen geïdentificeerd worden die een reëel risico vormen voor het optreden van endocriene verstoring in de Noordzee. Het betreft hier de organochloorverbindingen zoals DDT en zijn metabolieten, dioxines en furanen, PCB's en lindaan; de alkylfenolen en hun ethoxylaten en in het bijzonder octylfenol en nonylfenol; bepaalde PAK's; organotinverbindingen en in het bijzonder TBT en TPT en de metalen cadmium en kwik. Sommige van deze stoffen zijn reeds verboden of onderhevig aan bepaalde restricties, maar wegens hun persistent karakter en mogelijkheid tot bio-accumulatie en biomagnificatie worden deze stoffen nog frequent aangetroffen in het milieu en biota. Verder onderzoek is echter noodzakelijk om een gedetailleerde risicoschatting en risico-evaluatie uit te voeren m.b.t. endocrien verstorende effecten van deze stoffen.

Voor andere stoffen die gedetecteerd zijn in de Noordzee, is het onmogelijk om sluitende conclusies te formuleren omtrent de mogelijkheid dat ze endocriene verstoring veroorzaken in het Noordzee-ecosysteem. Bovendien is er een gebrek aan analytische gegevens voor stoffen met een endocrien verstorende activiteit die waarschijnlijk wel voorkomen in de Noordzee, maar die (nog) niet gemeten (kunnen) worden.

6 FORMULERING VAN ONDERZOEKSNODEN

De volgende onderzoeksnoden kunnen geformuleerd worden:

- identificatie van indicatorsoorten voor monitoring van endocriene verstoring in het milieu;
- samenstellen van een tiered screening systeem voor de evaluatie en detectie van

effecten en bepalen van effectconcentraties van endocrien verstorende stoffen bij mariene organismen;

- gebrek aan analytische gegevens van concentraties van natuurlijke en synthetische hormonen en endocrien verstorende stoffen in het aquatisch milieu (oppervlaktewateren en sedimenten, stedelijk en industrieel afvalwater, drinkwater en marien milieu);
- onderzoek naar het optreden van mogelijke ‘low dose effects’;
- gebrek aan informatie over hormoonconcentraties in dierlijke excretieproducten (belangrijk m.b.t. de bemestingsproblematiek);
- ontwikkeling van geschikte analysemethoden en –technieken voor de detectie van endocrien verstorende stoffen in verschillende milieumatrices (incl. organismen) wegens de zeer lage concentraties waarbij endocriene verstoring kan optreden;
- opstellen van normen specifiek voor endocrien verstorende stoffen voor de bescherming van het aquatisch milieu en de volksgezondheid rekening houdend met bio-accumulatie, biodegradatie, activiteit en eliminatie bij drinkwaterproductie en afvalwaterzuivering;
- studie van andere endocriene mechanismen dan de hersen-gonaden-as zoals hersen-thyroïd- en hersen-bijnier-as en de hypofyse en de link met endocrien gereguleerde functies (immunologische, neurologische);
- fundamenteel onderzoek van de endocrinologie van invertebraten.

7 KENNIS EN EXPERTISE IN BELGIË

Teneinde de onderzoeksnoden, geformuleerd in Hoofdstuk 6, af te stemmen in functie van de tekorten aan innoverende initiatieven of expertise op de verschillende onderzoeksvlakken dienen zij in het kaderwerk van bestaande kennis en expertise in België geplaatst te worden. Hiertoe wordt een lijst van experten opgesteld en een overzicht van hun belangrijkste referenties gegeven. Eveneens wordt een overzicht gegeven van de internationale contaten op het vlak van endocriene verstoring.

7.1 Lijst van experten

De lijst van expertise in België, weergegeven in Tabel XI, is samengesteld op basis van bevraging, de IWETO databank, de FEDRA-databank en Internetpagina’s van de onderzoeksgroepen. Hij omvat onderzoekers die betrokken zijn bij de verschillende aspecten van onderzoek met betrekking tot hormoon-ontregelende stoffen zoals: chemische analyse, biologische effecten, humane effecten, afvalwaterbehandeling en metabolisatie.

Naast de coördinaten van de onderzoeksgroep werd tevens hun specifieke activiteit op het vlak van hormonale verstoring weergegeven indien dit relevant geacht werd.

Tabel XI: overzicht van de Belgische expertise inzake endocrien verstorende stoffen

Id	Groep	Adres	Tel/fax	Contact	Activiteiten
1	Laboratorium voor Milieutoxicologie en Aquatische Ecologie	Fac. Landbouwkundige en Toeg. Biologische Wetenschappen, UG, Jozef Plateaustraat 22, 9000 Gent	T: +32(0)9 2643765 F: +32(0)9 2644199	Prof. Dr. Colin Janssen: *Colin.Janssen@rug.ac.be* Drs. ir. Tim Verslycke: *Tim.Verslycke@rug.ac.be*	Gisttest, invertebraten en vertebraten, zoetwater en marien
2	Laboratorium voor Andrologie en Reproductieve Endocrinologie	Fac. Geneeskunde, UG, De Pintelaan 185, 9000 Gent	T: +32 (0)9 2402133 F: +32 (0)9 2403897	Prof. Dr. Frank Comhaire: *Frank.Comhaire@rug.ac.be* Drs. Ir. Willem Dhooge: *Willem.Dhooge@rug.ac.be*	Milieuvervuiling en fertiliteit
3	Laboratorium voor Microbiële Ecologie	Fac. Landbouwkundige en Toeg. Biologische Wetenschappen, UG, Coupure links 654, 9000 Gent	T: +32(0)9 2645976 F: +32(0)9 2646231	Prof. Dr. ir. Willy Verstraete: *Willy.Verstraete@rug.ac.be*	Bioremediëring, waterzuivering
4	Analytische Chemie Atom and Mass Spectrometry	Fac. Wetenschappen, UG, INW, Proeftuinstraat 86, 9000 Gent	T: +32(0)9 2646600 F: +32(0)9 2646699	Prof. Dr. Luc Moens: *Luc.Moens@rug.ac.be*	TBT bepalingen
5	Vakgroep Farmacologie Heymans Instituut	Fac. Geneeskunde, UG, De Pintelaan 185, 9000 Gent	T: +32(0)9 2403374 F: +32(0)9 2404988	Prof. Dr. Romain Lefebvre : *Romain.Lefebvre@rug.ac.be*	

6	Vakgroep Bio-analyse	Fac. Farmac. Wetenschappen, UG, Harelbekestraat 72, 9000 Gent	T: +32(0)9 2648115 F: +32(0)9 2648199	Prof. Dr. Apr. Carlos Van Peteghem: *Carlos.VanPeteghem@rug.ac.be*	
7	Onderzoeksgroep Ecofysiologie en Biochemie	Fac Wetenschappen, Dept. Biologie, UA, Groenenborgerlaan 171, 2020 Antwerpen	T: +32(0)3 2180344 F: +32(0)3 2180497	Prof. Dr. Wim De Coen: *decoen@ruca.ua.ac.be*	Celcultuur
8	Onderzoeksgroep Ethologie	Fac. Wetenschappen, Dept. Biologie, UA, Universiteitsplein 1, 2610 Antwerpen	T: +32(0)3 8202284 F: +32(0)3 8202271	Prof. Dr. Marcel Eens: *eens@uia.ua.ac.be*	
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7.2 Lijst van Referenties

Op basis van bevraging, de IWETO-databank, de FEDRA-databank en de Internetpagina's van de betrokken onderzoeksgroepen werd een lijst van lopende en afgeronde projecten betreffende onderzoek omtrent endocrien verstorende stoffen opgemaakt (Tabel XII). In deze lijst verwijst de nummering naar het identificatienummer dat in Tabel XI toegekend werd aan elk van de onderzoeksgroepen. Daarnaast werden, indien gekend, de opdrachtgever en de duur van het project weergegeven.

Tabel XII: Lijst van onderzoeksprojecten ivm endocrien verstorende stoffen

Id	Project + ev. opdrachtgever en duur
1	The energy metabolism of the estuarine mysid *Neomysis integer* (*Crustacea: Mysidacea*) as a biomarker for endocrine disruption in estuaries, BOF-VEO, 2001-2003
1	Analytiek en metabolisatiestudies van endocriene verstoorders (natuurlijke hormonen en xenobiotica) bij aquatische invertebraten, BOF, 2002-2004
1	Ontwikkeling van een testmethodiek voor de detectie van endocrien verstorende verbindingen in het leefmilieu: een complementaire benadering gebaseerd op *in vivo* en *in vitro* eindcriteria, 1998-2001
1	Endocriene verstoring bij de estuariene invertebraat *Neomysis integer* (*Crustacea: Mysidacea*), IWT, 1999-2003
1	Ontwikkeling van moleculaire probes voor de detectie van endocriene verstoring bij inheemse vissoorten, IWT, 1999-2003
1	Opsporing van een mogelijk endocrien verstorend karakter van bepaalde producten en emissies van de farmaceutische industrie, farmaceutische firma, 2000-2004
1	Community programme of research on environmental hormones and endocrine disruptors (COMPREHEND), EU, 1999-2002
1	Identification of endocrine disrupting effects in aquatic organisms (IDEA), EU, 1998-2001
1	Reproductive endocrine disruption in fish, AWI, 1999-2002
1	Development of routine assays for the assessment of endocrine disruptive compounds in the environment, AWI
2	Opsporen van menselijke blootstelling aan hormoon ontregelende stoffen van de xeno-oestrogene groep in het milieu door middel van twee nieuwe bio-assays en gaschromatografie-massaspectrometrie, 1999
2	Detectie en eliminatie van menselijke blootstelling aan hormonale verstoorders in het milieu, EU, 1999-2001
2	opsporen van de verspreiding en effecten van stoffen met pseudo-oestrogene werking in Vlaamse waters, AWI, 2000-2002
2	Ontwikkeling van een nieuwe techniek voor het meten van drinkwaterkwaliteit met behulp van een Dipstick test voor alkylfenolen en stoffen die binden op de oestrogeen receptor, 1995-1999
2	Ontwikkeling van een 'dipstick test' voor de bepaling van nonylfenol en stoffen die zich binden aan oestrogeenreceptoren (cofinanciering europees project), 1996-2000

Id	Project + ev. opdrachtgever en duur (vervolg)
3	Emissie van oestrogene therapeutica in WZ7effluenten, 1999-2002
3	Emissie van oestrogene stoffen door verbrandingsovens, 2000-2002
5	Neuro-endocriene interacties in de gastro-intestinale tractus onder normale pathologische omstandigheden, DWTC, 1997-2001
6	Opsporen en eliminatie van menselijke blootstelling aan hormoonontregelende stoffen in het milieu, EU, 1999-2001
6	Ontwikkeling van een snelle screeningtest voor de bepaling van xeno-oestrogenen in watermonsters, IWT, 2000-2001
6	Ontwikkeling van een nieuwe techniek voor het meten van drinkwaterkwaliteit met behulp van Dipstick-test voor alkylfenolen en stoffen die binden op de oestrogeenreceptor, EU, 1996-2000
6	Detectie en kwantificatie van isoflavonoïden met oestrogene werking bij middel van GC/MS/MS, FWO, 1997-2000
7	Het gebruik van ‘subtractive hybridization PCR’ voor de evaluatie van toxische werkingsmechanismen van endocriene verstoorders bij de gewone karper (*Cyprinus carpio*), RUCA, 2000-2002
7	“Endocrine disrupting effects on aquatic organisms - Test Methodology development, EU, 1998-2001
7	Study of the environmental endocrine disrupting effects of pharmaceutical compounds, Janssen Pharmaceutica, 1998-200
9	Ontwikkeling en validatie van biomerkers voor de effecten van chemicaliën met een oestrogene capaciteit op vispopulaties
10	Ontwikkeling van een testmethodiek voor de detectie van endocrien verstorende verbindingen in het leefmilieu: een complementaire benadering gebaseerd op in vivo en in vitro eindcriteria, Min. Vl. Gem., 1999-2001
10	Validatie van endocrien verstorende stoffen met behulp van een vismodel: ontwikkeling van screening methoden voor aromatase inhibitoren, KUL, 1999-2001
10	Hormonale verstoring van de voortplanting van vissen als een monitor voor milieuverontreiniging, Min. Vl. Gemeenschap, 1999-2002
11 12	Opsporen van de verspreiding en effecten van stoffen met pseudo-oestrogene werking in Vlaamse waters, AWI, 2001-2003
11	Onderzoek naar de relatie tussen incidentie van clear cell adenocarcinoma (CCAC) en blootstelling aan xeno-oestrogenen in diverse Europese landen, 1997-1998
13	preliminair onderzoek naar oestrogene verstoring bij vissen, 1999
15	voorkomen van genotoxische en endocriene stoffen in oppervlaktewaters: evaluatie met biologische testmethoden
16	Impact van atrazine op het endocrien systeem bij vissen, 06/1999-12/2003
16	Hormonale controle en effect van bioaminen en pesticiden op het ionentransport t.h.v. de branchiën van euryhaliene crustaceeën, 09/1986-01/2000
17	Impact van aan sediment geassocieerde zware metalen en PCB’s op Noordzee biota, 1/1/97-2/2001

7.3 Lijst van internationale kontakten

Twee Belgische onderzoeksgroepen, o.l.v. resp. Prof. Janssen (UG) en Prof. De Coen (RUCA), zijn betrokken bij het Europese COMPREHEND RTD project (COMmunity Programme of Research on Environmental Hormones and Endocrine disruptors), dat gebaseerd is op het Euraqua netwerk. De leden uit de overige landen zijn hierna weergegeven.

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8 UITWERKEN VAN BELEIDSMAATREGELEN

Teneinde de impact van endocrien verstorende stoffen op het Noordzee ecosysteem te kunnen evalueren dienen verschillende aspecten geanalyseerd te worden. Enerzijds dient informatie beschikbaar te zijn omtrent het blootstellingpotentieel van de stof. Anderzijds dienen ecotoxicologische gegevens beschikbaar te zijn m.b.t. de endocrien verstorende effecten van de stof op mariene organismen. Op basis van beide gegevenssets kan de stof aan een risico-evaluatie onderworpen worden en kan het relatief belang van de stof met het oog op reductiemaatregelen ingeschat worden.

8.1 Definities

In het kader van deze studie kan gesteld worden dat stoffen een reëel risico vormen indien zij daadwerkelijk in de Noordzee en/of aangrenzende estuaria aanwezig zijn en indien zij een endocrien verstorend effect uitoefenen op mariene organismen. Op basis van beide criteria kunnen 3 groepen gedefinieerd worden.

GROEP 1: PRIORITAIRE STOFFEN

Stoffen met een endocrien verstorend effect op mariene organismen **EN** die daarnaast reeds gedetecteerd werden in de Noordzee en/of in de aangrenzende estuaria worden prioritair geacht. In functie van de kwaliteit van de gegevens situeren de maatregelen zich op het vlak van monitoring en/of ecotoxicologie of zijn zij reeds gericht op risico-evaluatie en reductiestrategieën.

GROEP 2: MOGELIJKS RELEVANTE STOFFEN

Tot deze groep behoren stoffen voor dewelke een endocrien verstorend effect werd vastgesteld bij mariene organismen, doch voor dewelke het blootstelling-potentieel m.b.t. het Belgisch Continentaal Plat en/of het Schelde-estuarium niet gekend is. In functie van de kwaliteit van de beschikbare gegevens situeren de maatregelen zich op het vlak van monitoring en/of ecotoxicologie.

GROEP 3: STOFFEN MET ONGEKENDE RELEVANTIE

Deze groep omvat stoffen voor dewelke in deze studie geen informatie beschikbaar is m.b.t. hun endocrien verstorend potentieel t.o.v. mariene organismen. Hun endocrien verstorende eigenschappen werden wel aangetoond bij zoetwatersoorten en/of terrestrische organismen. Dergelijke stoffen dienen een primaire screening te ondergaan teneinde hun relevantie m.b.t. endocrien verstorende effecten bij mariene organismen te evalueren.

8.2 Beleidsmaatregelen

Hierna wordt nader ingegaan op de verschillende groepen en worden de relevante beleidsmaatregelen toegelicht.

8.2.1 Groep 1: prioritaire stoffen

In deze studie werden 765 stoffen geïdentificeerd die hormonaal verstorende effecten kunnen veroorzaken. Slechts voor 34 stoffen, weergegeven in Tabel XIII, was informatie beschikbaar m.b.t. endocrien verstorende effecten bij mariene organismen. In Tabel XIII werd reeds een onderscheid gemaakt in functie van de beschikbaarheid van gegevens omtrent blootstelling, volgens de definities onder punt 8.1.

Voor de stoffen ingedeeld in groep 1 in Tabel XIII is informatie beschikbaar omtrent geschatte of gemeten concentraties in de waterkolom, het sediment of aquatische biota van de Noordzee en/of van de aangrenzende estuaria. Dit wordt hierna besproken.

BLOOTSTELLINGGEGEVENS

Een summier overzicht van de beschikbare blootstellinggegevens wordt gegeven in Tabel XIV. Hierbij dient opgemerkt te worden dat DDE onder meer als onzuiverheid aanwezig is in DDT en in het milieu kan terecht komen na degradatie van deze laatste (Verschueren, 1983).

Gelet op de beschikbare informatie worden de stoffen/stofgroepen uit Tabel XIV als prioritair beschouwd voor het Noordzee ecosysteem, wat impliceert dat zij een reëel risico vormen. M.b.t. deze stoffen bestaan reeds een aantal maatregelen:

- het gebruik van DDT als gewasbeschermingsmiddel verboden is krachtens de Richtlijn 91/414/EEG;
- het gebruik van PCB is verboden krachtens Richtlijn 76/769/EEG. M.b.t. de omzetting van deze richtlijn in nationale wetgeving hebben de gewesten een verwijderingsplan voor PCB's en PCT's opgesteld (Belgisch Staatsblad, 2000; Belgisch Staatsblad, 1999; BHK, 2000). Voor alle gewesten geldt dat PCB-houdende apparaten ten laatste tegen 31/12/2005 gereinigd en/of verwijderd moeten worden. Voor specifieke toepassingen of kleine volumes kunnen afwijkingen toegestaan worden tot ten laatste 31/12/2010.

Tabel XIII: stoffen met endocrien verstorend effect op mariene organismen

Groep 1	Groep 2
4-Nonylfenol (p-Nonylfenol)	**NATUURLIJKE HORMONEN**
4-tert-Octylfenol (p-tert-Octylfenol)	17-alfa-ethinylestradiol
Naftaleen (PAK)	17-beta-estradiol
op'-DDD	20-Hydroxyecdysone[1]
op'-DDE	alpha-Zearalenol[2]
op'-DDT	beta-Zearalenol[3]
PCB[4]	Estrone (Oestrone)[5]
Pyreen (PAK)	Zearalenon[6]
	SYNTHETISCHE STOFFEN
	Aldrin
	Bisfenol A
	Clophen A50
	Diazinon
	Diethylftalaat (DEP)
	Diethylstilbestrol (DES)
	Diphenyltindichloride
	Endosulfan
	Endrin
	Kepone (Chlordecone)
	Lindaan
	Malathion
	Methyl parathion
	OH-PCB30
	PCB 29 (2,4,5-trichloorbifenyl)
	PCB 77 (3,3',4,4'-tetrachloorbifenyl)
	Reteen
	Tributylstannaan
	Tributyltinacetaat
	Tributyltinchloride
	Trifenyltin

[1] Vervellinghormoon bij arthropoden

[2] metaboliet van zearalenon

[3] metaboliet van zearalenon

[4] somparameter, zie appendix 1

[5] hormoon geproduceerd door vrouwelijke organismen

[6] myco-oestrogeen

Tabel XIV: blootstellinggegevens van stoffen met endocrien verstorend potentieel bij mariene organismen

parameter	waterkolom	sediment	biota
DDD+DDE+DDT		x	
Nonylfenol	x	x	
Octylfenol		x	
PAK	x	x[1]	
PCB	x	x	x

In principe kan voor de stoffen/stofgroepen uit Tabel XIV een risico-evaluatie uitgevoerd worden gezien zowel informatie inzake blootstelling als inzake effect beschikbaar is. In eerste instantie dient echter de geschiktheid van deze informatie hiertoe te worden nagegaan.

Criteria inzake geschiktheid van data m.b.t. risico-evaluatie werden vastgelegd in de 'Technical Guidance Documents' (TGD) van de Europese Commissie m.b.t. de Richtlijn 63/67/EEG inzake risico-evaluatie voor nieuwe stoffen en de Verordening 1488/94 inzake risico-evaluatie voor bestaande stoffen (European Commission, 1996). M.b.t. blootstellinggegevens dienen volgende aspecten onderzocht te worden:

- Gehanteerde analysemethode;
- Representativiteit van de metingen (duur, plaats tov bronnen, …).

Tevens dient de gemeten omgevingsconcentratie in principe geëvalueerd te worden op basis van een vergelijking met een berekende, modelgebaseerde concentratie.

Inzake de beschikbare blootstellinggegevens, weergegeven in appendix I, is de gehanteerde analysemethode niet gekend. Verder zijn deze gegevens dikwijls niet actueel en de concentraties zijn niet altijd representatief voor het Schelde-estuarium en/of het Belgisch Continentaal Plat. Bijgevolg kan geconcludeerd worden dat de beschikbare blootstellinggegevens niet geschikt zijn voor de uitvoering van een risico-evaluatie m.b.t. organismen uit het Schelde-estuarium en/of het Belgisch Continentaal Plat. Bijgevolg dienen de betrokken stoffen/ stofgroepen opgenomen te worden in een monitoringprogramma. Teneinde een maximale efficiëntie na te streven dient dergelijk programma rekening te houden met de reeds bestaande netwerken.

In het kanaal, de zuidelijke Bocht van de Noordzee en het Schelde-estuarium worden sinds 1984 meetcampagnes uitgevoerd door het oceanografisch schip "R.V. BELGICA". Deze campagnes beogen enerzijds het invullen van opdrachten van

[1] zie appendix I

openbaar nut m.b.t. de monitoring van de kwaliteit van de mariene wateren en het Schelde-estuarium, anderzijds dragen zij bij tot het fundamenteel en toegepast wetenschappelijk onderzoek. Ook door de “Zeeleeuw”, een schip onder de bevoegdheid van het VLIZ, worden dergelijke projectgebonden meetcampagnes uitgevoerd.

Tot op heden zijn endocrien verstorende stoffen niet opgenomen in een vast monitoringprogramma, doch zij worden soms gemeten in het kader van specifieke onderzoeksprojecten. Ten behoeve van de naleving van internationale verplichtingen in het kader van de Oslo & Parijs Commissies (Verdrag van Parijs 1992) en het ‘Joint Assessment and Monitoring Programme’ (JAMP) worden o.a. zware metalen in een vast monitoringprogramma geanalyseerd in het sediment en in biota van het Belgisch Continentaal Plat en het Schelde-estuarium (zie appendix III). Vanuit economisch oogpunt is het bijgevolg nuttig deze meetlocaties over te nemen in het monitoringprogramma voor endocrien verstorende stoffen. In functie van de fysico-chemie van de stoffen dient naast het sediment ook de waterkolom bemonsterd te worden. Teneinde over voldoende meetgegevens te beschikken m.b.t. risico-evaluatie dienen de metingen maandelijks uitgevoerd te worden. Gelet op het feit dat endocrien verstorende effecten bij lage dosissen kunnen optreden is het noodzakelijk een voldoende lage detectielimiet te hanteren. Gelet op de efficiëntie en de coördinatie met het bestaande programma lijkt het aangewezen de BMM als verantwoordelijke overheid aan te duiden.

De uitvoering van dergelijk monitoringprogramma is slechts nuttig indien bruikbare informatie m.b.t. de effecten inzake endocriene verstoring beschikbaar is. Dit wordt hierna verder uitgewerkt.

EFFECTGEGEVENS

De geschiktheid van de effectgegevens is in eerste instantie afhankelijk van de gehanteerde testmethode. Tot op heden kan hieromtrent geen onderbouwde uitspraak gedaan worden gezien de ‘OECD Endocrine Disrupters Testing and Assessment Force (EDTA)’, belast met het opstellen van richtlijnen m.b.t. testmethoden, ten vroegste tegen 2003 de vaststelling van gestandaardiseerde ecotoxicologische testen m.b.t. endocriene verstoring voorziet (Commission of the European Communities COM, 2001). Naast de geschiktheid van de testmethode dient de beschikbare informatie m.b.t. de effecten te volstaan om een wetenschappelijk onderbouwde risico-evaluatie voor aquatische organismen uit te voeren. In de TGD (European Commission, 1996) werden criteria vastgelegd voor de afleiding van een ‘Predicted No Effect Concentration’ of ‘PNEC’ in functie van de beschikbare gegevens, zoals weergegeven in Tabel XV.

Tabel XV: criteria ter bepaling van PNEC, volgens TGD EC

Data	Veiligheidsfactor
Minstens 1 acute L(E)C_{50} voor elk van de trofische niveaus uit de basisset (vis, *Daphnia* en algen)	1000
1 chronische NOEC (vis of *Daphnia*)	100
2 chronische NOEC's voor soorten van een verschillend trofisch niveau (vis en/of *Daphnia* en/of algen)	50
Chronische NOEC's voor minstens 3 soorten (in principe vis, *Daphnia* en algen) van 3 verschillende trofische niveaus	10
Veldgegevens of ecosysteemmodellen (mesocosmos)	gevalspecifiek

M.b.t. de evaluatie van effectdata inzake endocriene verstoring bij mariene organismen kan het principe van de TGD, voorgesteld in Tabel XV, gehanteerd worden. De indicatorsoorten dienen echter relevante mariene organismen te zijn. Enkele knelpunten bij de toepassing van deze richtlijnen zijn het feit dat:

- Tot op heden nog geen standaardtestsoorten m.b.t. endocrien verstorende effecten in het marien milieu geïdentificeerd werden;
- In de beschikbare literatuur inzake endocriene verstoring dikwijls verwezen wordt naar het mogelijks optreden van 'low dose effects', wat het moeilijk maakt om begrippen als NOEC te hanteren. Dit begrip werd trouwens als onderzoeksnood aangehaald tijdens een workshop in Zweden, georganiseerd door de EU (European Commission, 2001).

Uit de databank blijkt dat de effectgegevens voor de stoffen uit Tabel XIV meestal betrekking hebben op terrestrische soorten en bijgevolg niet steeds voor representatieve organismen beschikbaar zijn. Verder werd meestal enkel een effectconcentratie weergegeven en was de betekenis van deze concentratie (NOEC, LOEC) niet gekend. Bijgevolg kan besloten worden dat de beschikbare effectgegevens niet volstaan om een adequate risico-evaluatie uit te voeren m.b.t. het marien milieu.

KWALITEITSCRITERIA

Deze studie heeft tevens tot doel de bestaande waterkwaliteitscriteria voor de prioritair geachte stoffen, geïdentificeerd als groep 1, kritisch te evalueren. In Tabel XVI wordt een overzicht gegeven van deze criteria.

Tabel XVI: bestaande gewestelijke waterkwaliteitscriteria voor groep 1-stoffen/stofgroepen

Parameter	Vlaanderen (VLAREM)	Brussel (KB 04/11/87)	Wallonië (KB 04/11/87)
DDT (totaal)	25 µg/l	-	-
pp'-DDT	10 µg/l	-	-
PCB	mediaan totaal ≤ 7 ng/l (gechlor. bifenylen)	mediaan totaal ≤ 7 ng/l	mediaan totaal ≤ 7 ng/l
PAK	mediaan totaal: ≤ 100 ng/l	mediaan totaal: ≤ 100 ng/l	mediaan totaal: ≤ 100 ng/l

De evaluatie heeft tot doel na te gaan of deze normen een voldoende garantie bieden om het optreden van endocrien verstorende effecten te verhinderen. In Tabel XVII wordt de beschikbare informatie omtrent effectconcentraties voor deze stoffen voor de verschillende aquatische organismen weergegeven. De vermelde effectconcentraties hebben betrekking op de concentratie bij dewelke het effect werd vastgesteld. Het is evenwel onduidelijk of dit de laagste concentratie uit een geteste 'range' is of indien enkel bij die concentratie getest werd. Naast de concentraties worden ook de effecten vermeld die bij de desbetreffende concentraties optreden. 'RT' duidt op 'room temperature'.

Tabel XVII: aquatische effectconcentraties voor prioritaire stoffen

Stof	Groep	Organisme	Leeftijd	*In vivo*/ *In vitro*	Opzet	Duur	T (°C)	Concentratie	Effect
DDT	crustacee	*Daphnia magna*	neonaat (< 24u)	*In vivo*	semi-statisch	21 dagen	21,6	1 µg/l	Slightly increased male to female sex ratio (not significant)
p,p'-DDT	vis	*Oncorhynchus mykiss*	juveniel	*In vitro*		5 uur		100 mg/l	Decreased ACTH-stimulated cortisol secretion
p,p'-DDT	vis	*Oncorhynchus mykiss*	juveniel	*In vitro*		5 uur		100 mg/l	Decreased cAMP-stimulated cortisol secretion
o,p'-DDT	vis	*Ictalurus punctatus* X	2 jaar	*In vitro*		5 uur	RT	IC50: 17,79 µM	Inhibition of radiolabeled estradiol binding to ER; relative potency (%) to estradiol: 0,012
o,p'-DDT	vis	*Carassius auratus*		*In vitro*				up to 25 µM	no significant binding to AR in brain and ovaries
o,p'-DDT	vis	*Carassius auratus*		*In vitro*				up to 25 µM	RBA to testosterone at 50%: 0,006%
o,p'-DDT	vis	*Oncorhynchus mykiss*		*In vitro*				up to 25 µM	No binding to AR in brain, testes and ovaries
o,p'-DDT	vis	*Oryzias Latipes*	bevrucht ei	*In vivo*	semi-statisch	100 dagen	20-22	1-50 µg/l	5-50 µg/l: induction of testis-ova
o,p'-DDT	vis	*Oryzias Latipes*	bevrucht ei	*In vivo*	semi-statisch	100 dagen	20-22	1-50 µg/l	50 µg/l: acute lethal
o,p'-DDT	vis	*Oryzias Latipes* X	adult	*In vivo*	semi-statisch	2 weken	20-22	2,5 µg/l	Delayed hatching of offspring
o,p'-DDT	vis	*Oryzias Latipes* X	adult	*In vivo*	semi-statisch	2 weken	20-22	2,5 µg/l	Female offspring at sexual maturity: more developed oocytes
o,p'-DDT	vis	*Oryzias Latipes* X	adult	*In vivo*	semi-statisch	2 weken	20-22	2,5 µg/l	Male offspring at 10 months of age: increased induction of vitellogenesis

Uit Tabel XVII blijkt dat geen effectgegevens beschikbaar zijn voor de PAK- en PCB-congeneren voor dewelke monitoringgegevens beschikbaar zijn. Alle gegevens, vermeld in Tabel XVII, hebben betrekking op laboratoriumtesten.

Gezien tot op heden nog geen gestandaardiseerde testen beschikbaar zijn m.b.t. endocriene verstoring zijn de relevante eindpunten om deze effecten te beoordelen nog niet éénduidig vastgelegd. Bijgevolg is het in principe niet mogelijk de beschikbare effectgegevens te toetsen aan de bestaande waterkwaliteitscriteria omdat de relevantie van de beschikbare eindpunten niet gekend is. Indien aangenomen wordt dat de waargenomen effecten als relevante eindpunten kunnen beschouwd worden kunnen volgende conclusies getrokken worden.

De waterkwaliteitsnorm voor DDT is een somparameter die geldt voor het totaal van de isomeren. Uit Tabel XVII blijkt dat sommige effectconcentraties voor het individueel isomeer op'-DDT reeds lager liggen dan de norm voor de somparameter. Ook de effectconcentratie van totaal DDT voor *Daphnia magna* lag lager dan de kwaliteitsnorm. Ondanks de beperkte informatie geven deze testresultaten aan dat de waterkwaliteitsnorm voor DDT mogelijks te hoog is om endocrien verstorende effecten te vermijden. Dit dient door uitgebreider onderzoek naar effectconcentraties van DDT op mariene organismen onderbouwd te worden.

Uit Tabel XVII blijkt dat de geteste concentratie van pp'-DDT een factor 10^4 hoger ligt dan de basiswaterkwaliteitsnorm. Verder kunnen volgende bemerkingen gemaakt worden:

- er is slechts een beperkte hoeveelheid informatie beschikbaar m.b.t. de aquatische effecten van pp'-DDT;
- er zijn geen gegevens beschikbaar m.b.t. aquatische testen bij lagere concentraties;
- de beschikbare informatie heeft betrekking op een acuut effect (testduur: 5 uur).

Bijgevolg kan omtrent de bestaande kwaliteitsnorm voor pp'-DDT geen conclusie getrokken worden m.b.t. de bescherming tegen endocrien verstorende effecten. Er is meer onderzoek nodig bij lagere concentraties, die in dezelfde grootte-orde van de basiswaterkwaliteitsnorm liggen.

CONCLUSIES

Er kan geconcludeerd worden dat verder onderzoek nodig is m.b.t. endocrien verstorende effecten bij mariene organismen, afgestemd op de activiteiten die op internationaal niveau aan de gang zijn. Dergelijke informatie wordt onder meer gecoördineerd door het 'Environment Institute' van het 'Joint Research Centre (JRC)' te Ispra (*http://endocrine.ei.jrc.it)*. Uit het overzicht van de Belgische expertise terzake blijkt dat hiertoe zeker het nodige potentieel in België aanwezig is.

Inzake bestaande en geplande onderzoeksactiviteiten op internationaal niveau kunnen volgende acties m.b.t. groep 1 stoffen vermeld worden:

- In een eerste screening, uitgevoerd door het Nederlandse Adviesbureau BHK in opdracht van het DG Milieu van de Europese Commissie (BHK, 2000), werden PCB's en nonylfenol als potentiële hormonale verstoorders geïdentificeerd;
- Volgens de communautaire strategie (Commission of the European Communities COM, 2001) is de Commissie van plan om op korte termijn een studie uit te schrijven om informatie te verzamelen omtrent de persistentie, productievolumes en juridische status van PAK's en octylfenol voor dewelke momenteel onvoldoende informatie beschikbaar is om een uitspraak te doen inzake (potentiële) hormoonontregeling;
- De UK voert momenteel een risico-beoordeling uit voor nonylfenol en 4-nonylfenol in het kader van de Verordening 793/93. Zowel inzake risico's voor volksgezondheid als leefmilieu werd reeds een opinie geformuleerd door het CSTEE. Het is evenwel onduidelijk of er effectief rekening gehouden werd met de beschikbare informatie inzake hormonale verstoring.

Indien voldoende, wetenschappelijk onderbouwde effectgegevens beschikbaar zijn dienen de stoffen opgenomen te worden in een monitoring-programma. De specificaties hiervan zijn weergegeven in Tabel XVIII.

Tabel XVIII: specificaties monitoringprogramma

Criterium	Specificatie
Parameters	Groep 1-stoffen
Meetpunten	Zie appendix III
Meetfrequentie	Maandelijks
Verantwoordelijke overheid	BMM

De bestaande waterkwaliteitsnorm voor DDT is op basis van de beschikbare informatie mogelijks te hoog om endocrien verstorende effecten bij mariene organismen te verhinderen. Dit dient door uitgebreider onderzoek naar effectconcentraties van DDT op mariene organismen onderbouwd te worden. Inzake PCB en pp'-DDT is meer onderzoek nodig bij lagere concentraties, die in dezelfde grootte-orde van de basiswaterkwaliteitsnormen liggen, om een onderbouwde uitspraak te doen omtrent de geschiktheid van het bestaand waterkwaliteitscriterium. Deze conclusies m.b.t. de bestaande waterkwaliteits-normen gelden enkel indien de waargenomen effecten als relevante eindpunten kunnen beschouwd worden. Bijgevolg dienen in eerste instantie relevante eindpunten onder de vorm van gestandaardiseerde testen gedefinieerd te worden.

8.2.2 Groep 2: mogelijks relevante stoffen

De stoffen die tot deze groep behoren werden reeds geïdentificeerd in Tabel XIII. Zij vertonen endocrien verstorende effecten t.o.v. mariene organismen, doch hun blootstellingpotentieel t.h.v. het Belgisch Continentaal Plat en/of het Schelde-

estuarium is niet gekend.

Ter informatie kan vermeld worden dat endosulfan momenteel nog toegelaten is als gewasbeschermingsmiddel in België doch is reeds verboden in Zweden, Denemarken, Nederland en Duitsland. De erkenning op Europees niveau wordt momenteel geëvalueerd krachtens Verordening 3600/92. Het gebruik van malathion als gewasbeschermingsmiddel is reeds verboden in Zweden, Denemarken en Oostenrijk. De erkenning van methylparathion krachtens Richtlijn 91/414/EEG wordt herbekeken krachtens Verordening 3600/92. Verder is krachtens Richtlijn 76/769/EEG het gebruik van PCB's in het algemeen verboden. Het gebruik van tributyltinverbindingen en trifenyltin is krachtens Richtlijn 76/769/EEG beperkt.

In functie van het beschikbare budget wordt een getrapte monitoring voorgesteld. Hiertoe dient in eerste instantie te worden nagegaan welke stoffen relevant zijn voor het Schelde-estuarium en het Belgisch Continentaal Plat. M.b.t. synthetische stoffen kan de potentiële aanwezigheid ingeschat worden op basis van volgende informatie: immissie naar lucht/oppervlaktewater, emissie naar lucht/oppervlaktewater, productiegegevens en gebruiksgegevens.

Het is aangewezen de relevant geachte stoffen gedurende 1 jaar op te nemen in een monitoringprogramma, zoals uitgewerkt onder punt 8.2.1. Naast de relevante synthetische stoffen dienen de natuurlijke hormonen uit Tabel XIII sowieso opgenomen te worden in dit programma.

Inzake aldrin, endrin en kepon geldt dat zij niet toegelaten zijn als gewasbeschermingsmiddel krachtens Richtlijn 91/414/EEG en bijgevolg op basis van bovenstaande criteria nooit als relevante stoffen kunnen geïdentificeerd worden. Bijgevolg dient op basis van hun fysicochemie te worden nagegaan of zij bijvoorbeeld omwille van hun persistentie toch nog in de Noordzee kunnen aanwezig zijn.

Op basis van de resultaten van de monitoringcampagne worden de stoffen uit groep 2 ofwel geherklasseerd in groep 1, ofwel niet relevant geacht voor het Schelde-estuarium en het Belgisch Continentaal Plat. Indien zij in groep 1 geklasseerd worden geldt de evaluatieprocedure, geformuleerd onder punt 8.2.1. Dit houdt onder meer in dat de kwaliteit van de beschikbare effectgegevens voor mariene organismen dient geanalyseerd te worden. Ter ondersteuning van deze evaluatie worden hierna de acties vermeld die voor stoffen uit groep 2 vastgelegd werden in de communautaire strategie (Commission of the European Communities COM, 2001) m.b.t. hormonale verstoorders:

- de Commissie is van plan om op korte termijn een studie op te zetten inzake de evaluatie van oestron, ethinyloestradiol en oestradiol om recente gegevens over de milieublootstelling en de effecten van deze stoffen te verzamelen (Commission of the European Communities COM, 2001);
- de Commissie zal de bevoegde autoriteiten van de lidstaten verzoeken om bij de

risico-evaluatie in het kader van de Richtlijn 91/414/EEG rekening te houden met het endocrien verstorend potentieel van endosulfan, lindaan, malathion en methylparathion;
- op korte termijn zal een studie opgezet worden om informatie te verzamelen m.b.t. de persistentie, productievolumes en de juridische status van PCB hydroxymetabolieten, waaronder OH-PCB 30.

8.2.3 Groep 3: stoffen met ongekende relevantie

Uit de databank blijkt dat bij slechts ± 4% van de geïdentificeerde endocriene geen verstoorders effecten t.a.v. marine organismen bestudeerd werden. Voor de overige 96% werd aangetoond dat zij endocrien verstorende effecten veroorzaken bij zoetwaterorganismen en/of terrestrische organismen. Teneinde de relevantie van deze stoffen m.b.t. mariene organismen te kunnen evalueren dient een 'tiered screening' systeem uitgewerkt te worden voor de evaluatie en detectie van endocrien verstorende effecten bij mariene organismen. Het onderzoek dient zich bij voorkeur te richten op organismen die kunnen voorkomen t.h.v. het Belgisch Continentaal Plat en het Schelde-estuarium. Verschillende internationale fora hebben zich reeds toegelegd op de ontwikkeling van dergelijke methoden. Onder meer heeft US EPA in 1998 het 'Endocrine Disruptor Screening Program (EDSP)' ontwikkeld (US EPA, 2000). In een eerste stap worden stoffen geïdentificeerd die een endocrien verstorend potentieel hebben op mensen, dieren in het wild en/of vissen. In een tweede stap wordt dit potentieel bevestigd en de effecten gekarakteriseerd. M.b.t. mariene organismen wordt de validatie van een invertebratentest (Mysidae) voorzien in 2004. Een gelijkaardige getrapte aanpak werd gevolgd door het Nederlands Adviesbureau BHK in een studie in opdracht van de DG Milieu van de Europese Commissie (BHK, 2000). Met het oog op een screening methode legt het 'Finnish Environmental Institute' (Assmuth en Louekari, 2001) de nadruk op de ontwikkeling van structuur-activiteit modellen en chemische informatiesystemen.

Daarnaast dient rekening gehouden te worden met activiteiten die reeds op internationaal niveau aan de gang zijn m.b.t. stoffen uit groep 3.

Volgens de communautaire strategie m.b.t. hormoonontregelaars (Commission of the European Communities COM, 2001):
- wordt geacht bewijsmateriaal voor hormonale ontregeling of potentiële hormoonontregeling beschikbaar te zijn voor chloordaan, dieldrin, hexachloorbenzeen en toxafeen. Er dient te worden nagegaan of deze informatie betrekking heeft op mariene organismen;
- is de Commissie van plan om op korte termijn een studie uit te schrijven om informatie te verzamelen omtrent de persistentie, productievolumes en juridische status van een aantal stoffen voor dewelke momenteel onvoldoende informatie beschikbaar is om een uitspraak te doen inzake (potentiële) hormoonontregeling.

Het betreft onder meer atrazine, dioxines, ftalaten, nonylfenol(di)ethoxylaten en pentachloorfenol.

Binnen het 5e kaderprogramma van de Gemeenschap voor O&O (1999-2002) heeft het onderzoek naar hormoonontregelaars bij de meest recente herzieningen van de werkprogramma's prioriteit gekregen. Dit resulteerde in een oproep tot voorstellen (30/05/2001), waarvoor 20 MIO euro beschikbaar gesteld wordt (Commission of the European Communities COM, 2001) en waarbij volgende onderzoeksprioriteiten vastgelegd werden: vaststelling van de blootstelling, selectie van kritische indicatoren ('end-points') en analyse van de risico's.

Deze prioriteiten houden rekening met de aan de gang zijnde werkzaamheden op internationaal niveau en zijn bedoeld ter ondersteuning van de tenuitvoerlegging van de communautaire strategie inzake stoffen die de hormoonhuishouding ontregelen (Community Research and Development Information Service, 2001).

Volgens de Europese Associatie van Metalen 'EUROMETAUX' behoren metalen en hun zouten niet tot de groep van endocriene verstoorders om volgende redenen (Eurometaux, 1999):

- De meeste endocriene verstoorders vertonen een fysische gelijkenis met endogene hormonen en blokkeren of imiteren hun werking, terwijl metaalionen gelijkenis vertonen met de complexe 3-dimensionale organische structuur van hormonen en het hoogst onwaarschijnlijk is dat zij een hormoonachtige activiteit vertonen. Bovendien werd een direct verband tussen hormonale verstoring en nadelige gezondheidseffecten bij mens en dier nog niet aangetoond;
- Endocrien verstorende effecten zouden vooral optreden bij lage concentraties, terwijl verschillende metalen essentieel zijn voor mens en dier en het bijgevolg onwaarschijnlijk is dat lage concentraties nadelige effecten zouden veroorzaken. Verder liggen de concentraties bij dewelke een toxisch effect van metalen wordt vastgesteld in het laboratorium veel hoger dan de typische omgevingsconcentraties.

Ook in de communautaire strategie voor hormoonontregelaars (Commission of the European Communities COM, 2001) worden cadmium, lood en kwik niet als endocriene verstoorders beschouwd. M.b.t. de visie van beide documenten dienen echter een aantal bemerkingen gemaakt te worden:

- Het is mogelijk dat de primaire effecten van metalen niet leiden tot endocriene verstoring. Deze kunnen echter secundaire effecten induceren die leiden tot hormonale verstoring;
- Slechts een beperkt aantal metalen zijn essentieel zoals koper, ijzer, zink, chroom (Cr^{3+}) en nikkel (planten). Bijgevolg kunnen de niet essentiële metalen zoals lood, cadmium en kwik wel een risico vormen bij o.a. lage concentraties. Dit werd trouwens in de huidige studie werd aangetoond gezien informatie beschikbaar is omtrent de verstoring van hormonaal geregelde processen door deze metalen.

Het feit dat metalen niet zouden thuishoren op lijsten van endocrien verstorende stoffen dient dus enigszins genuanceerd te worden. Er dient alleszins verder onderzoek uitgevoerd te worden naar het indirect effect van deze stoffen op hormonaal geregelde processen.

Binnen groep 3 kunnen een aantal stoffen onderscheiden worden voor dewelke reeds geschatte of gemeten concentraties in de waterkolom, het sediment of biota van de Noordzee en/of van de aangrenzende estuaria beschikbaar zijn. Bijgevolg dienen deze stoffen als prioritair beschouwd te worden bij het onderzoek naar endocrien verstorende effecten bij mariene organismen. Een overzicht van deze stoffen is weergegeven in Tabel XIX.

M.b.t. de stoffen uit Tabel XIX dient opgemerkt te worden dat het gebruik van chloordaan, toxafeen, dieldrin en hexachloorbenzeen als gewasbeschermingsmiddel niet meer toegelaten is volgens Richtlijn 91/414/EEG. Hun aanwezigheid is bijgevolg te wijten aan hun persistentie of aan illegaal gebruik.

Tabel XIX: stoffen gedetecteerd in de Noordzee en/of in aangrenzende estuaria met ongekend endocrien verstorend potentieel t.a.v. mariene organismen

Parameter	Waterkolom	Sediment	Biota
Atrazine	X		
Cadmium	X	X	X
Chloordaan			X
Dieldrin		X	
Dioxines			X
Ftalaten	X	X	
Hexachloorbenzeen		X	
Koper	X	X	
Kwik	X	X	
Lood	X	X	
Nanochlor			X
Nonylfenolethoxylaat + nonylfenoldiethoxylaat	X	X	
Pentachloorfenol	X	X	
Toxafeen			X
Trichlooretheen	X		
Zink	X	X	X

8.3 Conclusies

Op basis van de beschikbare informatie is het duidelijk dat er momenteel veel te weinig gekend is m.b.t. blootstelling aan en effecten van hormonaal verstorende stoffen in het marien milieu van het Belgisch Continentaal Plat en het Schelde-estuarium om een wetenschappelijk verantwoorde risico-analyse uit te voeren. Bijgevolg is het voorbarig om op dit moment reductie- en/of saneringsmaatregelen voor te stellen. De beleidsmaatregelen dienen in eerste instantie gericht te zijn op het uitbreiden van de kennis inzake blootstelling en effecten bij mariene organismen zodat risico-evaluatie mogelijk wordt.

In Tabel XX wordt een schematisch overzicht gegeven van de voorgestelde beleidsmaatregelen in functie van de beschikbare informatie.

Tabel XX: beleidsmaatregelen in functie van de beschikbare informatie

Groep	Aandeel van de geïdentificeerde stoffen	Blootstelling	Effecten marien	Maatregelen
1	± 1%	+	+	• ecotoxicologisch onderzoek afwerken • monitoring programma (permanent)
2	± 4%	-	+	• identificatie te monitoren stoffen • monitoring programma (1 jaar)
3	± 95%	+/-	-	Screening mariene effecten

In Figuur 1 worden de verschillende toetsingen weergegeven die moeten uitgevoerd worden in de evaluatieprocedure ter bepaling van de beleidsmaatregelen. De beleidsmaatregelen die op basis van de beschikbare informatie geïdentificeerd werden, zijn in ovalen cirkels aangeduid in Figuur 1.

Op basis van de beschikbare expertise kan België zich in een trekkersrol profileren mbt onderzoek naar endocrien verstorende effecten. Dit kan zich enerzijds vertalen in een sterkere participatie in internationale fora. Anderzijds kunnen nationale thematische netwerken opgericht worden, op basis van de specifieke expertise vermeld in Tabel XII. Vanzelfsprekend dient het onderzoek afgestemd te worden op de activiteiten die binnen internationale fora aan de gang zijn teneinde overlapping te vermijden en integratie te bevorderen. Hierbij wordt vooral gedacht aan organisaties als EU, FAO, LRTAP, IFCS, IPCS, OECD, OSPAR, UNEP en

WHO. Daarnaast werden onder meer in Finland (Assmuth en Louekari, 2001), het Verenigd Koninkrijk (Environment Agency, 2000) en Duitsland (Gies et al., 2001) reeds programma's en strategieën rond endocrien verstorende stoffen ontwikkeld, die richtinggevend kunnen zijn voor het beleid in België.

Mbt bestaande kwaliteitscriteria voor PCB en pp'-DDT geldt dat verder effectonderzoek bij concentraties in de grootte-orde van deze criteria nodig is teneinde te kunnen nagaan of deze criteria afdoende zijn om ook het optreden van endocrien verstorende effecten te voorkomen. Inzake DDT kan op basis van de beschikbare informatie gesteld worden dat het huidige waterkwaliteitscriterium hoogstwaarschijnlijk niet volstaat om endocrien verstorende effecten te vermijden.

Figuur 1: evaluatieprocedure ter bepaling van de beleidsmaatregelen (OK: voldoende; NOK: niet voldoende).

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Appendix I: Concentraties van (potentieel) endocrien verstorende stoffen in de Noordzee

Stof	Locatie	Concentratie	Referentie
Atrazine	België	< 0,05 µg/l	NSTF, 1993
	Engeland	0,005-0,012 µg/l	Gough et al., 1994
	Duitsland	0,1 µg/l	Bester en Hühnerfuss, 1993
Totaal DDT[1]	Schelde-estuarium	1-13 µg/kg sediment	OSPAR, 2000
Dieldrin	Noordzee (subregio 3a)	7-810 mg/kg sediment (drooggewicht)	NSTF, 1993
	Schelde-estuarium	1-2 µg/kg sediment	OSPAR, 2000
Endosulfan	Noordzee	0,01 µg/l (schatting in het water)	MNZ, 1995
α-HCH[2]	Noordzee (subregio 4)	0,35-0,4 pg/l	NSTF, 1993
β-HCH	Noordzee (subregio 4)	0,1-0,2 pg/l	NSTF, 1993
Lindaan (γ-HCH)	Noordzee (subregio 4)	1,8-2,3 pg/l	NSTF, 1993
	Noordzee	0,01 µg/l (schatting in het water)	MNZ, 1995
	Schelde-estuarium	0,004 mg/kg sediment	OSPAR, 2000
Pentachlorofenol	Noordzee	PEC[3]: 0,07-0,79 µg/l (1983-1991)	Euro Chlor, 1999
	Noordzee	PEC: 0,01-0,11 µg/l (1992-1997)	Euro Chlor, 1999
	Noordzee	PEC: 26,5 µg/kg sediment (1991-1994)	Euro Chlor, 1999
	Noordzee	PEC: < 10 µg/kg sediment (1995-1997)	Euro Chlor, 1999
PCB[4,5]	Noordzee (subregio 4)	16 pg/l (open zee)	NSTF, 1993
	Nederland	29 pg/l (kustwater)	NSTF, 1993
	Nederland	0,026 mg/kg zwevende stof (kustwater)	NSTF, 1993
PCB[6]	Noordzee (subregio 4)	2,5-5 µg/kg sediment	NSTF, 1993

[1] DDD, DDE en DDT
[2] Hexachlorocyclohexaan
[3] Predicted environmental concentration
[4] Polychloorbifenyl
[5] Som van PCB 28, 52, 101, 118, 138, 153 en 180
[6] Som van PCB 28, 52, 101, 138 en 180

	Waddenzee	10 µg/kg sediment	NSTF, 1993
	Nederland	20-30 µg/kg sediment	NSTF, 1993
	België	10 µg/kg sediment	NSTF, 1993
PCB[1]	Frankrijk	0,2-1,3 mg/kg sediment	NSTF, 1993
PCB[2]	Engeland	3-19 µg/kg sediment	Klamer en Fomsgaard, 1993
Nonylfenol	Engeland	< 0,2 tot 5,8 µg/l	Blackburn et al., 1999
	Engeland	< 0,1 tot 1,7 mg/kg sediment	Blackburn et al., 1999
Octylfenol	Schelde	20 µg/kg sediment	OSPAR, 2000
NPEO + NP2EO[3]	Engeland	< 0,6 tot 76 µg/l	Blackburn et al., 1999
	Engeland	< 0,5 tot 3,6 mg/kg sediment	Blackburn et al., 1999
PAK[4]	Engeland	0,054-3,054 mg kg sediment	Woodhead et al., 1999
PAK[5]	Nederland	0,938 mg/kg zwevende stof	NSTF, 1993
	Nederland	0,7 mg/kg sediment	NSTF, 1993
	Noordzee (subregio 4)	0,2 mg/kg sediment	NSTF, 1993
PAK[6]	Engeland	0,7-2,7 mg/kg sediment	Klamer en Fomsgaard, 1993
Totaal PAK	Waddenzee	0,218 mg/kg sediment	OSPAR, 2000
	Schelde-estuarium	6,08 mg/kg sediment	OSPAR, 2000
	Estuaria en kustwateren	1-8,5 µg/l	OSPAR, 2000

[1] Isomeren/congeneren niet vermeld

[2] Som van PCB 18, 28, 44, 52, 101, 105, 118, 138, 153, 170, 180, 187

[3] Som van nonylfenolethoxylaat en nonylfenoldiethoxylaat

[4] Som van naftaleen, acenaftaleen, fluoreen, phenanthreen, anthraceen, fluorantheen, pyreen, benz[a]anthraceen, chrysene, benzo[a]pyreen, benzo[e]pyreen, benzo[b]fluorantheen, benzo[k]fluorantheen, benzo[ghi]peryleen en dibenzo[a,h]anthraceen

[5] Som van indeno[1,2,3-cd]pyreen, benzo[b]fluorantheen, benzo[k]fluorantheen, benzo[a]pyreen, benzo[ghi]peryleen en fluorantheen (6 van Borneff)

[6] Som van fluorantheen, phenanthreen, pyreen, benz[a]anthraceen, chryseen, benzo[a]pyreen, benzo[e]pyreen, benzo[b]fluorantheen, benzo[k]fluorantheen, benzo[ghi]peryleen en indeno[1,2,3-cd]pyreen

Appendix II: Concentraties van endocrien verstorende stoffen in mariene organismen

Stof	Organisme	Locatie	Concentratie	Weefsel	Referentie
Chlordaan	Witflankdolfijn (*Lagenorhynchus acutus*)	Schotland	2,09-12,416 mg/ kg vers gewicht	Onderhuids vetweefsel	McKenzie et al., 1997
	Potvis (*Physeter macrocephalus*)	Noordzee	0,98-2,8 mg/kg vet	Onderhuids vetweefsel	Law et al., 1997
o,p'-DDD	Witflankdolfijn (*Lagenorhynchus acutus*)	Schotland	0, 242-1,462 mg/ kg vers gewicht	Onderhuids vetweefsel	McKenzie et al., 1997
	Bruinvis (*Phocoena phocoena*)	Denemarken	0,29-3,8 mg/kg vet	Onderhuids vetweefsel	Berggrena et al., 1999
	Bruinvis (*Phocoena phocoena*)	Noorwegen	0,14-4,2 mg/kg vet	Onderhuids vetweefsel	Berggrena et al., 1999
	Potvis (*Physeter macrocephalus*)	Noordzee	0,048-0,11 mg/ kg vers gewicht	Onderhuids vetweefsel	Law et al., 1996
p,p'-DDD	Schar (*Limanda limanda*)	Noordzee	0,03-0,1 mg/kg vet	Lever	Dethlefsen et al., 1996
	Wijting (*Merlangius merlangus*)	Noordzee	0,07-0,561 mg/kg vet	Lever	Dethlefsen et al., 1996
	Aalscholver (*Phalacrocorax carbo sinensis*)	Zuid-Nederland	0,012 mg/ kg vers gewicht	Ei	Dirksen et al., 1995
	Noordse vinvis (*Balaenoptera borealis*)	Ijsland	0,03-0,09 mg/kg vet	Onderhuids vetweefsel	Borrell, 1993
	Gewone vinvis (*Balaenoptera physalus*)	Ijsland	0,12-0,18 mg/kg vet	Onderhuids vetweefsel	Borrell, 1993
	Griend (*Globicephala melas*)	Faroer Eilanden	1,89-4,5 mg/kg vet	Onderhuids vetweefsel	Borrell, 1993
	Grijze zeehond (*Halichoerus grypus*)	Britse kust	0,1 mg/kg vers gewicht	Onderhuids vetweefsel	Law et al., 1989

p,p'-DDD	Witflankdolfijn (*Lagenorhynchus acutus*)	Faroer Eilanden	2,33-3,33 mg/kg vet	Onderhuids vetweefsel	Borrell, 1993
	Witflankdolfijn (*Lagenorhynchus acutus*)	Schotland	0,988-4,435 mg/ kg vers gewicht	Onderhuids vetweefsel	McKenzie et al., 1997
	Gewone zeehond (*Phoca vitulina*)	Britse kust	0,043 mg/ kg vers gewicht	Onderhuids vetweefsel	Law et al., 1989
	Gewone zeehond (*Phoca vitulina*)	Noordzee	0,014-0,266 mg/kg vet	Onderhuids vetweefsel	Vetter et al., 1996
	Bruinvis (*Phocoena phocoena*)	Faroer Eilanden	0,94-1,31 mg/kg vet	Onderhuids vetweefsel	Borrell, 1993
	Bruinvis (*Phocoena phocoena*)	Noordzee	0,392-5,263 mg/kg vet	Onderhuids vetweefsel	Vetter et al., 1996
	Bruinvis (*Phocoena phocoena*)	Denemarken	0,32-5,2 mg/kg vet	Onderhuids vetweefsel	Berggrena et al., 1999
	Bruinvis (*Phocoena phocoena*)	Noorwegen	0,51-5,5 mg/kg vet	Onderhuids vetweefsel	Berggrena et al., 1999
	Potvis (*Physeter macrocephalus*)	Ijsland	1,1 mg/kg vet	Onderhuids vetweefsel	Borrell, 1993
	Potvis (*Physeter macrocephalus*)	Noordzee	0,3-0,65 mg/kg vers gewicht	Onderhuids vetweefsel	Law et al., 1996
DDE[1]	Potvis (*Physeter macrocephalus*)	België	1,9 mg/kg vers gewicht	Onderhuids vetweefsel	Joiris et al., 1997a
	Potvis (*Physeter macrocephalus*)	België	2,9 mg/kg vet	Onderhuids vetweefsel	Joiris et al., 1997a
	Potvis (*Physeter macrocephalus*)	België	0,1 mg/kg vers gewicht	Spierweefsel	Joiris et al., 1997a

[1] Isomeer niet vermeld

DDE	Potvis (*Physeter macrocephalus*)	België	1,9 mg/kg vet	Spierweefsel	Joiris et al., 1997a
	Potvis (*Physeter macrocephalus*)	België	0,2 mg/kg vers gewicht	Lever	Joiris et al., 1997a
	Potvis (*Physeter macrocephalus*)	België	2,4 mg/kg vet	Lever	Joiris et al., 1997a
	Potvis (*Physeter macrocephalus*)	België	3,7 mg/kg vers gewicht	Nieren	Joiris et al., 1997a
	Potvis (*Physeter macrocephalus*)	België	8,9 mg/kg vet	Nieren	Joiris et al., 1997a
o,p'-DDE	Aalscholver (*Phalacrocorax carbo sinensis*)	Zuid-Nederland	< 0,001 mg/ kg vers gewicht	Ei	Dirksen et al., 1995
	Zeekoet (*Uria aalge*)	België	< 0,0005 mg/kg		Joiris et al., 1997b
	Witflankdolfijn (*Lagenorhynchus acutus*)	Schotland	0,136-0,902 mg/ kg vers gewicht	Onderhuids vetweefsel	McKenzie et al., 1997
	Potvis (*Physeter macrocephalus*)	Noordzee	0,014-0,12 mg/ kg vers gewicht	Onderhuids vetweefsel	Law et al., 1996
p,p'-DDE	Kabeljauw (*Gadus morhua*)	Nederland	0,32 mg/kg vet	Lever	NSTF, 1993
	Schar (*Limanda limanda*)	Nederland	0,12 mg/kg vet	Lever	NSTF, 1993
	Schar (*Limanda limanda*)	Noordzee	0,293-1,032 mg/kg vet	Lever	Dethlefsen et al., 1996
	Wijting (*Merlangius merlangus*)	Noordzee	0,244-1,597 mg/kg vet	Lever	Dethlefsen et al., 1996
	Bot (*Platichthys flesus*)	België	0,17 mg/kg vet	Lever	NSTF, 1993
	Aalscholver (*Phalacrocorax carbo sinensis*)	Zuid-Nederland	2,9 mg/kg vers gewicht	Ei	Dirksen et al., 1995
	Zeekoet (*Uria aalge*)	België	0,2-0,4 mg/ kg drooggewicht	Spierweefsel	Joiris et al., 1997b
	Zeekoet (*Uria aalge*)	België	5,4-9,2 mg/kg vet	Spierweefsel	Joiris et al., 1997b

p,p'-DDE	Zeekoet (*Uria aalge*)	België	0,1-0,4 mg/ kg drooggewicht	Nieren	Joiris et al., 1997b
	Zeekoet (*Uria aalge*)	België	0,8-3,9 mg/kg vet	Nieren	Joiris et al., 1997b
	Zeekoet (*Uria aalge*)	België	0,5-1,5 mg/ kg drooggewicht	Lever	Joiris et al., 1997b
	Zeekoet (*Uria aalge*)	België	4-17 mg/kg vet	Lever	Joiris et al., 1997b
	Noordse vinvis (*Balaenoptera borealis*)	Ijsland	0,05-0,21 mg:/kg vet	Onderhuids vetweefsel	Borrell, 1993
	Gewone vinvis (*Balaenoptera physalus*)	Ijsland	0,34-0,49 mg/kg vet	Onderhuids vetweefsel	Borrell, 1993
	Griend (*Globicephala melas*)	Faroer Eilanden	7,97-20,23 mg kg vet	Onderhuids vetweefsel	Borrell, 1993
	Grijze zeehond (*Halichoerus grypus*)	Britse kust	0,1 mg/kg vers gewicht	Onderhuids vetweefsel	Law et al., 1989
	Witflankdolfijn (*Lagenorhynchus acutus*)	Faroer Eilanden	10,32-15,63 mg/kg vet	Onderhuids vetweefsel	Borrell, 1993
	Witflankdolfijn (*Lagenorhynchus acutus*)	Schotland	1,428-46,294 mg/ kg vers gewicht	Onderhuids vetweefsel	McKenzie et al., 1997
	Gewone zeehond (*Phoca vitulina*)	Britse kust	3,4 mg/kg vers gewicht	Onderhuids vetweefsel	Law et al., 1989
	Gewone zeehond (*Phoca vitulina*)	Noordzee	1,142-8,082 mg/kg	Onderhuids vetweefsel	Vetter et al., 1996
	Bruinvis (*Phocoena phocoena*)	Faroer Eilanden	2,12-3 mg/kg vet	Onderhuids vetweefsel	Borrell, 1993
	Bruinvis (*Phocoena phocoena*)	Noordzee	0,696-8,45 mg/kg	Onderhuids vetweefsel	Vetter et al., 1996
	Potvis (*Physeter macrocephalus*)	Ijsland	4,16 mg/kg vet	Onderhuids vetweefsel	Borrell, 1993

p,p'-DDE	Potvis (*Physeter macrocephalus*)	Noordzee	3-5,2 mg/ kg vers gewicht	Onderhuids vetweefsel	Law et al., 1996
DDT[1]	Potvis (*Physeter macrocephalus*)	Orkney Eilanden	1,184-15,501 mg/kg vet	Onderhuids vetweefsel	Wells et al., 1997
	Potvis (*Physeter macrocephalus*)	Schotland	11,376 mg/kg vet	Onderhuids vetweefsel	Wells et al., 1997
	Potvis (*Physeter macrocephalus*)	België	5,301-12,66 mg/kg vet	Onderhuids vetweefsel	Wells et al., 1997
o,p'-DDT	Californische meeuw (*Larus Californicus*)	Great Lakes	2-5 mg/kg	Ei	Fry & Toone, 1981
	Aalscholver (*Phalacrocorax carbo sinensis*)	Zuid-Nederland	45 µg/kg vers gewicht	Ei	Dirksen et al., 1995
	Noordse vinvis (*Balaenoptera borealis*)	Ijsland	0,05-0,18 mg/kg vet	Onderhuids vetweefsel	Borrell, 1993
	Gewone vinvis (*Balaenoptera physalus*)	Ijsland	0,31-0,43 mg/kg vet	Onderhuids vetweefsel	Borrell, 1993
	Griend (*Globicephala melas*)	Faroer Eilanden	3,6-8,44 mg/kg vet	Onderhuids vetweefsel	Borrell, 1993
	Witflankdolfijn (*Lagenorhynchus acutus*)	Faroer Eilanden	5,71-9,19 mg/kg vet	Onderhuids vetweefsel	Borrell, 1993
	Bruinvis (*Phocoena phocoena*)	Faroer Eilanden	0,66-0,98 mg/kg vet	Onderhuids vetweefsel	Borrell, 1993
	Bruinvis (*Phocoena phocoena*)	Denemarken	1,5-20 mg/kg vet	Onderhuids vetweefsel	Berggrena et al., 1999
	Bruinvis (*Phocoena phocoena*)	Noorwegen	1,2-7,6 mg/kg vet	Onderhuids vetweefsel	Berggrena et al., 1999

[1] Isomeer niet vermeld

o,p'-DDT	Potvis (*Physeter macrocephalus*)	Ijsland	2,43 mg/kg vet	Onderhuids vetweefsel	Borrell, 1993
	Potvis (*Physeter macrocephalus*)	Noordzee	0,46-1,1 mg/kg vet	Onderhuids vetweefsel	Law et al., 1996
p,p'-DDT	Schar (*Limanda limanda*)	Noordzee	0,016-0,041 mg/kg vet	Lever	Dethlefsen et al., 1996
	Wijting (*Merlangius merlangus*)	Noordzee	0,054-0,399 mg/kg vet	Lever	Dethlefsen et al., 1996
	Kokmeeuw (*Larus ridibundus*)	Schelde-estuarium	10-118 mg/kg vet	Ei	Stronkhorst et al., 1993
	Aalscholver (*Phalacrocorax carbo sinensis*)	Zuid-Nederland	0,17 mg/ kg vers gewicht	Ei	Dirksen et al., 1995
	Noordse vinvis (*Balaenoptera borealis*)	Ijsland	0,03-0,1 mg/kg vet	Onderhuids vetweefsel	Borrell, 1993
	Gewone vinvis (*Balaenoptera physalus*)	Ijsland	0,15-0,19 mg/kg vet	Onderhuids vetweefsel	Borrell, 1993
	Griend (*Globicephala melas*)	Faroer Eilanden	3,53-6,66 mg/kg vet	Onderhuids vetweefsel	Borrell, 1993
	Grijze zeehond (*Halichoerus grypus*)	Britse kust	18 mg/kg vers gewicht	Onderhuids vetweefsel	Law et al., 1989
	Witflankdolfijn (*Lagenorhynchus acutus*)	Faroer Eilanden	2,33-3,49 mg/kg vet	Onderhuids vetweefsel	Borrell, 1993
	Witflankdolfijn (*Lagenorhynchus acutus*)	Schotland	1,091-3,821 mg/kg vers gewicht	Onderhuids vetweefsel	McKenzie et al., 1997
	Gewone zeehond (*Phoca vitulina*)	Britse kust	1,6 mg/kg vers gewicht	Onderhuids vetweefsel	Law et al., 1989
	Gewone zeehond (*Phoca vitulina*)	Noordzee	0,28-2,921 mg/kg	Onderhuids vetweefsel	Vetter et al., 1996

p,p'-DDT	Bruinvis (*Phocoena phocoena*)	Faroer Eilanden	0,72-1,26 mg/kg vet	Onderhuids vetweefsel	Borrell, 1993
	Bruinvis (*Phocoena phocoena*)	Noordzee	0,277-3,566 mg/kg	Onderhuids vetweefsel	Vetter et al., 1996
	Bruinvis (*Phocoena phocoena*)	Denemarken	0,52-36 mg/kg vet	Onderhuids vetweefsel	Berggrena et al., 1999
	Bruinvis (*Phocoena phocoena*)	Noorwegen	0,19-9 mg/kg vet	Onderhuids vetweefsel	Berggrena et al., 1999
	Potvis (*Physeter macrocephalus*)	Ijsland	2,54 mg/kg vet	Onderhuids vetweefsel	Borrell, 1993
	Potvis (*Physeter macrocephalus*)	Noordzee	1,1-1,9 mg/ kg vers gewicht	Onderhuids vetweefsel	Law et al., 1996
Dieldrin	Kabeljauw (*Gadus morhua*)	Nederland	0,2 mg/kg vet	Lever	NSTF, 1993
	Schar (*Limanda limanda*)	Nederland	0,1 mg/kg vet	Lever	NSTF, 1993
	Kokmeeuw (*Larus ridibundus*)	Schelde-estuarium	78-1009 mg/kg vet	Ei	Stronkhorst et al., 1993
	Aalscholver (*Phalacrocorax carbo sinensis*)	Zuid-Nederland	0,11 mg/ kg vers gewicht	Ei	Dirksen et al., 1995
	Zeekoet (*Uria aalge*)	België	< 0,0005 mg/ kg drooggewicht		Joiris et al., 1997b
	Grijze zeehond (*Halichoerus grypus*)	Britse kust	0,16 mg/ kg vers gewicht	Onderhuids vetweefsel	Law et al., 1989
	Witflankdolfijn (*Lagenorhynchus acutus*)	Schotland	0,95-4,74 vers gewicht	Onderhuids vetweefsel	McKenzie et al., 1997
	Gewone zeehond (*Phoca vitulina*)	Britse kust	0,23 mg/ kg vers gewicht	Onderhuids vetweefsel	Law et al., 1989
	Potvis (*Physeter macrocephalus*)	Noordzee	0,2-0,45 mg/kg vers gewicht	Onderhuids vetweefsel	Law et al., 1996

Dieldrin	Potvis (*Physeter macrocephalus*)	Noordzee	0,29-0,82 mg/kg vet	Onderhuids vetweefsel	Law et al., 1997
	Potvis (*Physeter macrocephalus*)	Orkney Eilanden	0,034-0,14 mg/kg vet	Onderhuids vetweefsel	Wells et al., 1997
	Potvis (*Physeter macrocephalus*)	Schotland	0,379-0,389 mg/kg vet	Onderhuids vetweefsel	Wells et al., 1997
	Potvis (*Physeter macrocephalus*)	België	0,171-1,538 mg/kg vet	Onderhuids vetweefsel	Wells et al., 1997
Dioxines[1]	Visdief (*Sterna hirundo*)	Westplaat+Zee brugge	0,199-1,559 µg/kg vet	Dooierzak	Bosveld et al., 1995
	Visdief (*Sterna hirundo*)	Westplaat+Zee brugge	0,024-0,349 µg/ kg vers gewicht	Dooierzak	Bosveld et al., 1995
	Visdief (*Sterna hirundo*)	Griend	0,248-0,569 µg/kg vet	Dooierzak	Bosveld et al., 1995
TCDD[2]	Bruinvis (*Phocoena phocoena*)	Denemarken	0,065-0,59 ng/kg vet	Onderhuids vetweefsel	Berggrena et al., 1999
	Bruinvis (*Phocoena phocoena*)	Noorwegen	0,19-0,64 ng:kg vet	Onderhuids vetweefsel	Berggrena et al., 1999
PeCCD[3]	Bruinvis (*Phocoena phocoena*)	Denemarken	0,32-1,7 ng/kg vet	Onderhuids vetweefsel	Berggrena et al., 1999
	Bruinvis (*Phocoena phocoena*)	Noorwegen	0,68-2,4 ng/kg vet	Onderhuids vetweefsel	Berggrena et al., 1999
α-HCH[4]	Schar (*Limanda limanda*)	Noordzee	12-19 µg/kg vet	Lever	Dethlefsen et al., 1996

[1] Som van dioxins en furanen

[2] 2,3,7,8-Tetrachlorodibenzo-p-dioxine

[3] 1,2,3,7,8-Pentachlorodibenzo-p-dioxine

[4] Hexachlorocyclohexaan

α-HCH	Wijting (*Merlangius merlangus*)	Noordzee	15-34 µg/kg vet	Lever	Dethlefsen et al., 1996
	Grijze zeehond (*Halichoerus grypus*)	Britse kust	17 µg/kg vers gewicht	Onderhuids vetweefsel	Law et al., 1989
	Gewone zeehond (*Phoca vitulina*)	Britse kust	23 µg/kg vers gewicht	Onderhuids vetweefsel	Law et al., 1989
	Witflankdolfijn (*Lagenorhynchus acutus*)	Schotland	48-128 µg/ kg vers gewicht	Onderhuids vetweefsel	McKenzie et al., 1997
	Potvis (*Physeter macrocephalus*)	Noordzee	4-12 µg/ kg vers gewicht	Onderhuids vetweefsel	Law et al., 1996
β-HCH	Grijze zeehond (*Halichoerus grypus*)	Britse kust	< 1 µg/kg vers gewicht	Onderhuids vetweefsel	Law et al., 1989
	Gewone zeehond (*Phoca vitulina*)	Britse kust	< 1 µg/kg vers gewicht	Onderhuids vetweefsel	Law et al., 1989
	Potvis (*Physeter macrocephalus*)	Noordzee	5-9 µg/kg vers gewicht	Onderhuids vetweefsel	Law et al., 1996
Lindaan	Kabeljauw (*Gadus morhua*)	Nederland	42 µg/kg vet	Lever	NSTF, 1993
	Schar (*Limanda limanda*)	Nederland	40-80 µg/kg vet	Lever	NSTF, 1993
	Schar (*Limanda limanda*)	Noordzee	36-72 µg/kg vet	Lever	Dethlefsen et al., 1996
	Wijting (*Merlangius merlangus*)	Noordzee	32-58 µg/kg vet	Lever	Dethlefsen et al., 1996
	Bot (*Platichthys flesus*)	België	82 µg/kg vet	Lever	NSTF, 1993
	Kokmeeuw (*Larus ridibundus*)	Schelde-estuarium	12-1177 mg/kg vet	Ei	Stronkhorst et al., 1993
	Zeekoet (*Uria aalge*)	België	< 0,0005 mg/ kg drooggewicht		Joiris et al., 1997b
	Grijze zeehond (*Halichoerus grypus*)	Britse kust	< 1 µg/kg vers gewicht	Onderhuids vetweefsel	Law et al., 1989

Lindaan	Gewone zeehond (*Phoca vitulina*)	Britse kust	4 µg/kg vers gewicht	Onderhuids vetweefsel	Law et al., 1989
	Witflankdolfijn (*Lagenorhynchus acutus*)	Schotland	40-139 µg/kg vers gewicht	Onderhuids vetweefsel	McKenzie et al., 1997
	Gewone zeehond (*Phoca vitulina*)	Noordzee	< 1-29 µg/kg	Onderhuids vetweefsel	Vetter et al., 1996
	Bruinvis (*Phocoena phocoena*)	Noordzee	84-954 µg/kg	Onderhuids vetweefsel	Vetter et al., 1996
	Potvis (*Physeter macrocephalus*)	Noordzee	46-130 µg/ kg vers gewicht	Onderhuids vetweefsel	Law et al., 1996
HCH[1]	Potvis (*Physeter macrocephalus*)	Noordzee	100-220 µg/kg vet	Onderhuids vetweefsel	Law et al., 1997
PCB[2]	Kabeljauw (*Gadus morhua*)	België	2,5 mg/kg vet	Lever	NSTF, 1993
	Kabeljauw (*Gadus morhua*)	Nederland	2,6 mg/kg vet	Lever	NSTF, 1993
	Schar (*Limanda limanda*)	Nederland	1,9-2,8 mg/kg vet	Lever	NSTF, 1993
	Bot (*Platichthys flesus*)	België	4,6 mg/kg vet	Lever	NSTF, 1993
	Bruinvis (*Phocoena phocoena*)	Nederland	40,3 mg/kg vet	Onderhuids vetweefsel	NSTF, 1993
	Witsnuitdolfijn (*Lagenorhynchus albirostris*)	Nederland	10,3 mg:kg vet	Onderhuids vetweefsel	NSTF, 1993
PCB[3]	Kabeljauw (*Gadus morhua*)	België	0,43 mg/kg vet	Spierweefsel	Roose et al., 1998
	Kabeljauw (*Gadus morhua*)	België	2,7 mg/kg vet	Lever	Roose et al., 1998
	Bot (*Platichthys flesus*)	België	1,7 mg/kg vet	Spierweefsel	Roose et al., 1998
	Bot (*Platichthys flesus*)	België	1,8 mg/kg vet	Lever	Roose et al., 1998
PCB[4]	Zeekoet (*Uria aalge*)	België	2,7-11,1 mg/	Lever	Joiris et al., 1997b

[1] Isomeer niet vermeld
[2] Som van PCB 28, 52, 101, 118, 138, 153 en 180
[3] Som van PCB 28, 31, 52, 101, 105, 118, 138, 153, 156 en 180
[4] Isomeren/congeneren niet vermeld

			kg drooggewicht		
	Zeekoet (*Uria aalge*)	België	23,3-103,5 mg/kg vet	Lever	Joiris et al., 1997b
	Zeekoet (*Uria aalge*)	België	1,5-4 mg/ kg drooggewicht	Spierweefsel	Joiris et al., 1997b
	Zeekoet (*Uria aalge*)	België	41,9-104,9 mg/kg vet	Spierweefsel	Joiris et al., 1997b
	Zeekoet (*Uria aalge*)	België	0,6-2,9 mg/ kg drooggewicht	Nieren	Joiris et al., 1997b
	Zeekoet (*Uria aalge*)	België	4-24,2 mg/kg vet	Nieren	Joiris et al., 1997b
	Noordse vinvis (*Balaenoptera borealis*)	Ijsland	0,18-0,46 mg/kg vet	Onderhuids vetweefsel	Borrell, 1993
	Gewone vinvis (*Balaenoptera physalus*)	Ijsland	0,94-1,26 mg/kg vet	Onderhuids vetweefsel	Borrell, 1993
	Griend (*Globicephala melas*)	Faroer Eilanden	26,27-48-81 mg/kg vet	Onderhuids vetweefsel	Borrell, 1993
	Grijze zeehond (*Halichoerus grypus*)	Britse kust	18 mg/kg vers gewicht	Onderhuids vetweefsel	Law et al., 1989
	Gewone zeehond (*Phoca vitulina*)	Britse kust	23 mg/kg vers gewicht	Onderhuids vetweefsel	Law et al., 1989
	Witflankdolfijn (*Lagenorhynchus acutus*)	Faroer Eilanden	25,34-42,68 mg/kg vet	Onderhuids vetweefsel	Borrell, 1993
	Bruinvis (*Phocoena phocoena*)	Faroer Eilanden	8,83-13,39 mg/kg vet	Onderhuids vetweefsel	Borrell, 1993
	Potvis (*Physeter macrocephalus*)	Ijsland	10,51 mg/kg	Onderhuids vetweefsel	Borrell, 1993
	Potvis (*Physeter macrocephalus*)	Noordzee	7,2-16,8 mg/kg vet	Onderhuids vetweefsel	Law et al., 1997
PCB	Potvis (*Physeter macrocephalus*)	Orkney Eilanden	0,308-9,332 mg/kg vet	Onderhuids vetweefsel	Wells et al., 1997
	Potvis	Schotland	5,427-8,388 mg/kg vet	Onderhuids	Wells et al., 1997

	(*Physeter macrocephalus*)			vetweefsel	
	Potvis (*Physeter macrocephalus*)	België	4,4-21,217 mg/kg vet	Onderhuids vetweefsel	Wells et al., 1997
	Potvis (*Physeter macrocephalus*)	Nederland	3,911-7,011 mg/kg vet	Onderhuids vetweefsel	Wells et al., 1997
PCB[1]	Bruinvis (*Phocoena phocoena*)	Denemarken	2,2-22 mg/kg vet	Onderhuids vetweefsel	Berggrena et al., 1999
	Bruinvis (*Phocoena phocoena*)	Noorwegen	7,2-33 mg/kg vet	Onderhuids vetweefsel	Berggrena et al., 1999
Aroclor 1260	Potvis (*Physeter macrocephalus*)	België	14,2 mg/kg vet	Spierweefsel	Joiris et al., 1997a
	Potvis (*Physeter macrocephalus*)	België	0,8 mg/kg vers gewicht	Spierweefsel	Joiris et al., 1997a
	Potvis (*Physeter macrocephalus*)	België	13,5 mg/kg vet	Lever	Joiris et al., 1997a
	Potvis (*Physeter macrocephalus*)	België	1,1 mg/kg vers gewicht	Lever	Joiris et al., 1997a
	Potvis (*Physeter macrocephalus*)	België	17,5 mg/kg vet	Nieren	Joiris et al., 1997a
	Potvis (*Physeter macrocephalus*)	België	7,2 mg/kg vers gewicht	Nieren	Joiris et al., 1997a
	Potvis (*Physeter macrocephalus*)	België	21 mg/kg vet	Onderhuids vetweefsel	Joiris et al., 1997a
	Potvis (*Physeter macrocephalus*)	België	13,5 mg/ kg vers gewicht	Onderhuids vetweefsel	Joiris et al., 1997a
PCB 77	Visdief (*Sterna hirundo*)	Westplaat+Zee brugge	0,011-0,083 mg/kg vet	Dooierzak	Bosveld et al., 1995
	Visdief	Westplaat+Zee	0,002-0,02 mg/	Dooierzak	Bosveld et al., 1995

[1] Som van PCB 52, 101, 118, 138, 153 en 180

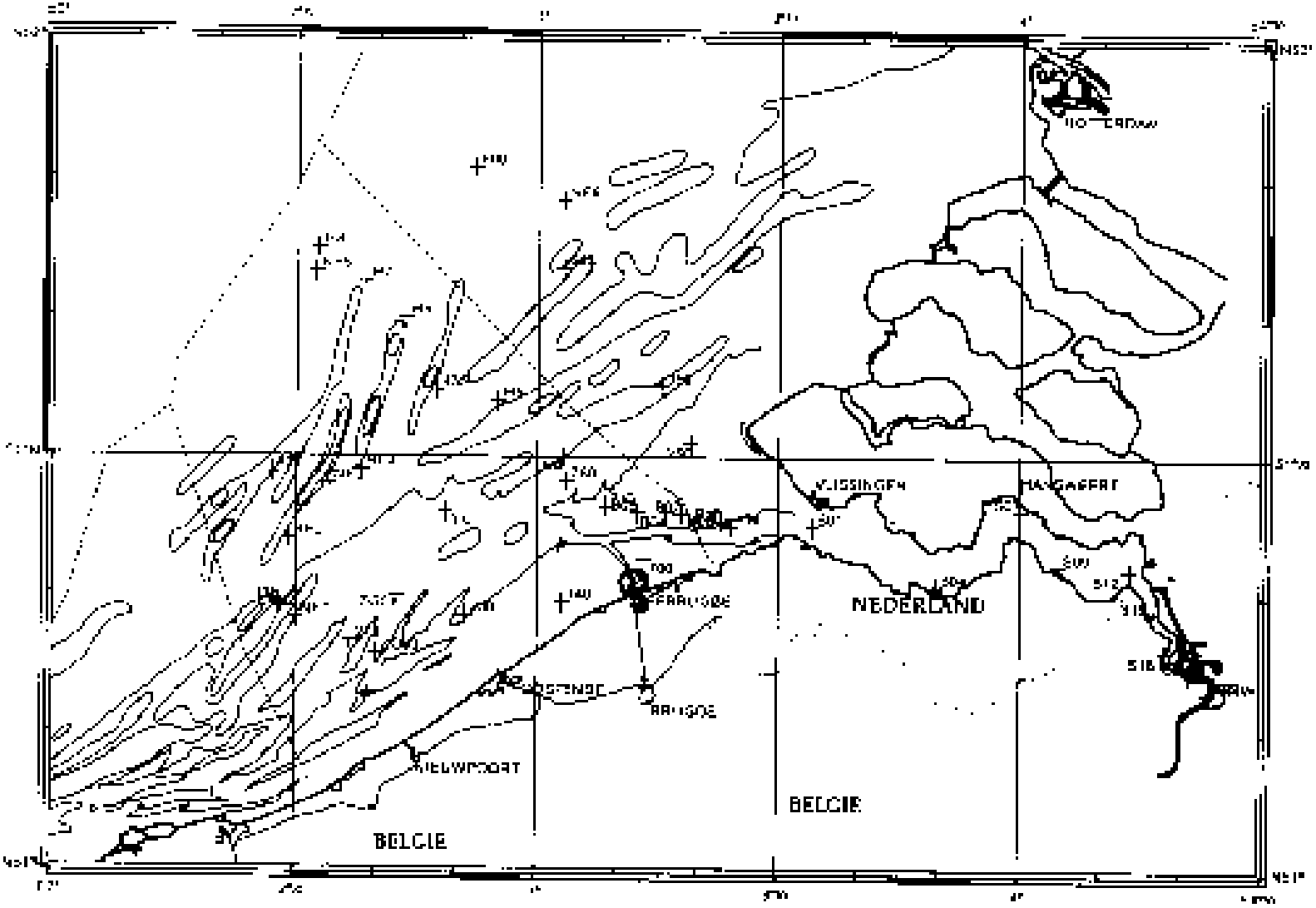
	(*Sterna hirundo*)	brugge	kg vers gewicht		
	Visdief (*Sterna hirundo*)	Griend	0,01-0,043 mg/kg vet	Dooierzak	Bosveld et al., 1995
	Visdief (*Sterna hirundo*)	Griend	0,001-0,009 mg/ kg vers gewicht	Dooierzak	Bosveld et al., 1995
PCB 126	Visdief (*Sterna hirundo*)	Westplaat+Zee brugge	0,014-0,031 mg/kg vet	Dooierzak	Bosveld et al., 1995
	Visdief (*Sterna hirundo*)	Westplaat+Zee brugge	0,003-0,008 mg/ kg vers gewicht	Dooierzak	Bosveld et al., 1995
	Visdief (*Sterna hirundo*)	Griend	0,014-0,046 mg/kg vet	Dooierzak	Bosveld et al., 1995
	Visdief (*Sterna hirundo*)	Griend	0,004-0,006 mg/ kg vers gewicht	Dooierzak	Bosveld et al., 1995
PCB 138	Schar (*Limanda limanda*)	Noordzee	0,172-1,058 mg/kg vet	Lever	Dethlefsen et al., 1996
	Wijting (*Merlangius merlangus*)	Noordzee	0,144-1,876 mg/kg vet	Lever	Dethlefsen et al., 1996
	Aalscholver (*Phalacrocorax carbo sinensis*)	Zuid-Nederland	3,5 mg/kg vers gewicht	Ei	Dirksen et al., 1995
	Visdief (*Sterna hirundo*)	Westplaat+Zee brugge	3-117 mg/kg vet	Dooierzak	Bosveld et al., 1995
	Visdief (*Sterna hirundo*)	Westplaat+Zee brugge	0,8-47 mg/kg vers gewicht	Dooierzak	Bosveld et al., 1995
	Visdief (*Sterna hirundo*)	Griend	31-104 mg/kg vet	Dooierzak	Bosveld et al., 1995
PCB 138	Visdief (*Sterna hirundo*)	Griend	8-17 mg/kg vers gewicht	Dooierzak	Bosveld et al., 1995
	Witflankdolfijn	Schotland	0,634-8,407 mg/kg vers	Onderhuids	McKenzie et al.,

	(*Lagenorhynchus acutus*)		gewicht	vetweefsel	1997
	Bruinvis (*Phocoena phocoena*)	Denemarken	0,67-6,2 mg/kg vet	Onderhuids vetweefsel	Berggrena et al., 1999
	Bruinvis (*Phocoena phocoena*)	Noorwegen	2-10 mg/kg vet	Onderhuids vetweefsel	Berggrena et al., 1999
	Potvis (*Physeter macrocephalus*)	Noordzee	0,41-0,8 mg:kg vers gewicht	Onderhuids vetweefsel	Law et al., 1996
PCB 153	Schar (*Limanda limanda*)	Noordzee	0,224-1,7 mg/kg vet	Lever	Dethlefsen et al., 1996
	Wijting (*Merlangius merlangus*)	Noordzee	0,159-2,399 mg/kg vet	Lever	Dethlefsen et al., 1996
	Scholekster (*Haematopus ostralegus*)	Schelde-estuarium	5,5-14 mg/kg vet	Ei	Stronkhorst et al., 1993
	Kokmeeuw (*Larus ridibundus*)	Schelde-estuarium	0,3-19,7 mg/kg vet	Ei	Stronkhorst et al., 1993
	Aalscholver (*Phalacrocorax carbo sinensis*)	Zuid-Nederland	4,4 mg/kg vers gewicht	Ei	Dirksen et al., 1995
	Dwergstern (*Sterna albifrons*)	Schelde-estuarium	5,1-5,2 mg/kg vet	Ei	Stronkhorst et al., 1993
	Visdief (*Sterna hirundo*)	Schelde-estuarium	4,5-31,7 mg/kg vet	Ei	Stronkhorst et al., 1993
	Visdief (*Sterna hirundo*)	Westplaat+Zee brugge	3-134 mg/kg vet	Dooierzak	Bosveld et al., 1995
	Visdief (*Sterna hirundo*)	Westplaat+Zee brugge	0,009-49 mg/ kg vers gewicht	Dooierzak	Bosveld et al., 1995
PCB 153	Visdief (*Sterna hirundo*)	Griend	35-117 mg/kg vet	Dooierzak	Bosveld et al., 1995
	Visdief	Griend	7,5-18 mg/	Dooierzak	Bosveld et al., 1995

	(*Sterna hirundo*)		kg vers gewicht		
	Grote stern (*Sterna scandvicensis*)	Schelde-estuarium	1,6-7,6 mg/kg vet	Ei	Stronkhorst et al., 1993
	Witflankdolfijn (*Lagenorhynchus acutus*)	Schotland	0,67-1,16 mg/ kg vers gewicht	Onderhuids vetweefsel	McKenzie et al., 1997
	Bruinvis (*Phocoena phocoena*)	Denemarken	1-10 mg/kg vet	Onderhuids vetweefsel	Berggrena et al., 1999
	Bruinvis (*Phocoena phocoena*)	Noorwegen	2,5-14 mg/kg vet	Onderhuids vetweefsel	Berggrena et al., 1999
	Potvis (*Physeter macrocephalus*)	Noordzee	0,45-0,83 mg/ kg vers gewicht	Onderhuids vetweefsel	Law et al., 1996
PCB 180	Schar (*Limanda limanda*)	Noordzee	0,032-0,429 mg/kg vet	Lever	Dethlefsen et al., 1996
	Wijting (*Merlangius merlangus*)	Noordzee	0,029-0,761 mg/kg vet	Lever	Dethlefsen et al., 1996
	Aalscholver (*Phalacrocorax carbo sinensis*)	Zuid-Nederland	1,7 mg/kg vers gewicht	Ei	Dirksen et al., 1995
	Visdief (*Sterna hirundo*)	Westplaat+Zee brugge	2-70 mg/kg vet	Dooierzak	Bosveld et al., 1995
	Visdief (*Sterna hirundo*)	Westplaat+Zee brugge	0,6-25 mg/ kg vers gewicht	Dooierzak	Bosveld et al., 1995
	Visdief (*Sterna hirundo*)	Westplaat+Zee brugge	21-70 mg/kg vet	Dooierzak	Bosveld et al., 1995
	Visdief (*Sterna hirundo*)	Westplaat+Zee brugge	5-10 mg/ kg vers gewicht	Dooierzak	Bosveld et al., 1995
	Witflankdolfijn (*Lagenorhynchus acutus*)	Schotland	0,22-3,2 mg/ kg vers gewicht	Onderhuids vetweefsel	McKenzie et al., 1997
PCB 180	Bruinvis (*Phocoena phocoena*)	Denemarken	0,18-3,3 mg/kg vet	Onderhuids vetweefsel	Berggrena et al., 1999
	Bruinvis	Noorwegen	0,95-5,6 mg/kg vet	Onderhuids	Berggrena et al.,

	(*Phocoena phocoena*)			vetweefsel	1999
	Potvis (*Physeter macrocephalus*)	Noordzee	0,21-0,39 mg/ kg vers gewicht	Onderhuids vetweefsel	Law et al., 1996
Toxafeen	Haring (*Clupea harengus*)	Nederland	0,4 mg/kg vet	Spierweefsel	NSTF, 1993
	Kabeljauw (*Gadus morhua*)	Nederland	0,2 mg/kg vet	Lever	NSTF, 1993
	Makreel (*Scomber scombrus*)	Nederland	0,14 mg/kg vet	Spierweefsel	NSTF, 1993
	Witsnuitdolfijn (*Lagenorhynchus albirostris*)	Nederland	27 mg/kg vet	Onderhuids vetweefsel	NSTF, 1993
	Bruinvis (*Phocoena phocoena*)	Nederland	8,7 mg/kg vet	Onderhuids vetweefsel	NSTF, 1993
Nonachlor	Witflankdolfijn (*Lagenorhynchus acutus*)	Schotland	1,082-9,488 mg/kg vers gewicht	Onderhuids vetweefsel	McKenzie et al., 1997
	Potvis (*Physeter macrocephalus*)	Noordzee	0,42-0,98 mg/kg vers gewicht	Onderhuids vetweefsel	Law et al., 1996

Appendix III: Voorstel meetpunten monitoringprogramma (BMM, 2000)


NEDERLAND
BELGIE
BELGIE

Evaluatie van de impact van endocrien verstorende stoffen op het Noordzee-ecosysteem

DATABANK

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Eindverslag Juni 2001

Opdrachtgever: DWTC

INHOUDSOPGAVE

1 LIJST MET AFKORTINGEN

Chemicals

ID: identification number (in reference to other lists)
Ph: phase
P: persistance
D: degradation
A: accumulation
Y: yes
N: no
L: liquid
G: gas
S: solid

Effects

-

Endocrine

T: temperature

References

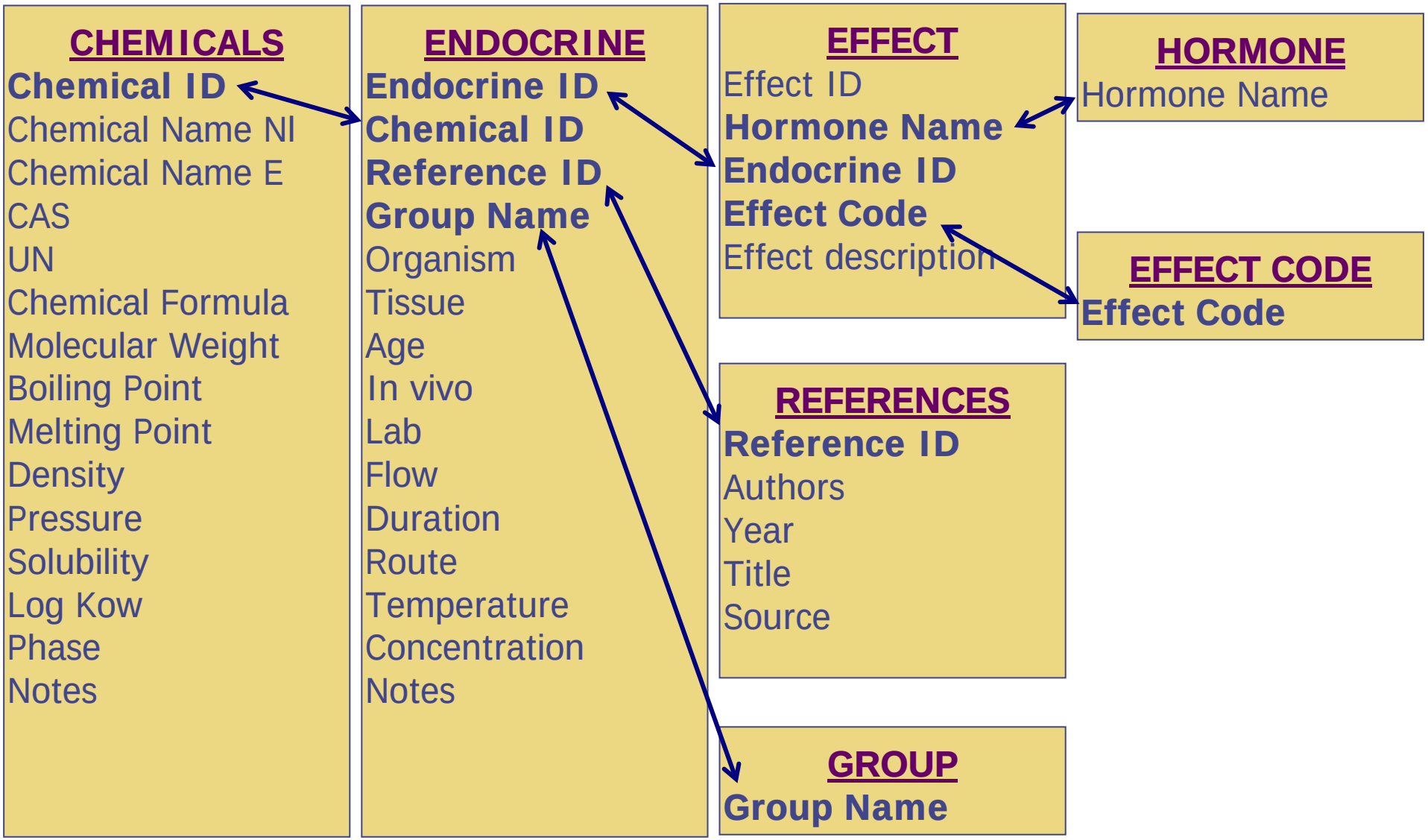
-

2 STRUCTUUR EN GEBRUIK DATABASE

De databank werd opgemaakt in MS Access en bevat verschillende lijsten die relationeel met elkaar verbonden zijn door middel van sleutels. Zo is de lijst met chemicaliën ('Chemicals') verbonden aan de lijst met endocriene effecten ('Endocrine') via de sleutel 'Chem ID' welke in beide lijsten is vermeld. Opzoekingen ('query's') kunnen gebeuren via de programma specifieke zoekopdrachten van het programma Access. In totaal bevat deze databank 423 referenties, 765 chemicaliën en werden 2355 test cases besproken.

Bovendien werden de lijsten 'chemicals', 'references', 'effects' en 'endocrine' gepubliceerd met MS Word onder tabelvorm. Hierdoor kunnen bevragingen gebeuren onder de standaard zoekopdracht van het desbetreffende programma. De lijst met chemicaliën ('Chemicals') werd gesorteerd op het veld 'Chem ID'; de lijst met referenties ('References') op 'Ref ID'; de lijst met effectbeschrijvingen ('Effects') op 'Effect ID'; de lijst met endocriene effecten op organismen werd alfabetisch gesorteerd op het veld 'Group' en nadien op het veld 'Organism'.

De structuur van de databank en de relationele sleutels tussen de verschillende lijsten is weergegeven in onderstaande tabel en toegelicht met een voorbeeld.


CHEMICALS
Chemical ID
Chemical Name NI
Chemical Name E
CAS
UN
Chemical Formula
Molecular Weight
Boiling Point
Melting Point
Density
Pressure
Solubility
Log Kow
Phase
Notes
ENDOCRINE
Endocrine ID
Chemical ID
Reference ID
Group Name
Organism
Tissue
Age
In vivo
Lab
Flow
Duration
Route
Temperature
Concentration
Notes
EFFECT
Effect ID
Hormone Name
Endocrine ID
Effect Code
Effect description
HORMONE
Hormone Name
EFFECT CODE
Effect Code
REFERENCES
Reference ID
Authors
Year
Title
Source
GROUP
Group Name

Tabel: References

Ref ID	Authors	Year	Title	Source
26	Soto, A.M., Chung, K.L., Sonnenschein, C.	1994	The pesticides endosulfan, toxaphene, and dieldrin have estrogenic effects on human estrogen-sensitive cells.	Environ. Health Perspect., 102:380-383

Tabel: Endocrine

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*In vivo*	Lab	Flow	Duration	Route	T (°C)	Concen tration	Notes
26	**2598**	**240**	Mammalian	Human	MCF-7 cells	-	*In vitro*	lab	-	6 d	-	-	10 µm	Technical grade; E screen

Tabel: Effects

Effect ID	Hormone Name	Endocrine ID	Effect Code	Description
183	Estrogen	**2598**	-	Proliferation of cells; relative potency to estradiol: 0.0001%

Tabel: Chemicals

Chem ID	Chemical Name Dutch	Chemical Name English	CAS	UN	Chemical formula	Mol weight	Boiling Point	Melting Point	…
240	DDT	DDT	50-29-3	-	C14H9Cl5	354,49	260 °C	108 °C	…

Chemicals

Lijst met potentieel endocrien verstorende chemicaliën (765)

Effects

Lijst met beschreven effecten (3516)

Endocrine

Lijst met beschreven effectstudies (2355)

References

Lijst van geraadpleegde literatuur (423)

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
201	3318	289	Amphibian	Acris Crepitans (Cricket frog)			*In vivo*	Field			Environmental contamination			
249	3770	606	Amphibian	Ambystomia tigrinum (Tiger Salamander)	Gonad	Larva	*In vivo*	Lab		28 d	Intraperitoneal		12.5 µg	Injection every other day
249	3771	380	Amphibian	Ambystomia tigrinum (Tiger Salamander)	Gonad	Larva	*In vivo*	Lab		28 d	Intraperitoneal		12.5 µg	Injection every other day
249	3772	240	Amphibian	Ambystomia tigrinum (Tiger Salamander)	Gonad	Larva	*In vivo*	Lab	Semi-static	28 d	Water		0.01 ppm	
249	3773	358	Amphibian	Ambystomia tigrinum (Tiger Salamander)	Gonad	Larva	*In vivo*	Lab	Semi-static	28 d	Water		0.01 ppm	
233	3636	355	Amphibian	Xenopus laevis (African clawed frog)	Ovary	Adult	*In vitro*	Lab		24 h		20-23	IC50 = 72 nM	Germinal vesicle breakdown assay
233	3637	354	Amphibian	Xenopus laevis (African clawed frog)	Ovary	Adult	*In vitro*	Lab		24 h		20-23	5-5000 nM	Germinal vesicle breakdown assay
233	3638	242	Amphibian	Xenopus laevis (African clawed frog)	Ovary	Adult	*In vitro*	Lab		24 h		20-23	0.625-4 µM	Germinal vesicle breakdown assay
233	3639	425	Amphibian	Xenopus laevis (African clawed frog)	Ovary	Adult	*In vitro*	Lab		24 h		20-23	0.625-4 µM	Germinal vesicle breakdown assay
233	3640	285	Amphibian	Xenopus laevis (African clawed frog)	Ovary	Adult	*In vitro*	Lab		24 h		20-23	0.625-4 µM	Germinal vesicle breakdown assay
233	3641	157	Amphibian	Xenopus laevis (African clawed frog)	Ovary	Adult	*In vitro*	Lab		24 h		20-23	0.625-4 µM	Germinal vesicle breakdown assay
353	4421	282	Amphibian	Xenopus laevis (African clawed frog)	Hepatic ER	Adult	*In vitro*	Lab		24 h		4	IC50 = 12.5 µM	
353	4422	157	Amphibian	Xenopus laevis (African clawed frog)	Hepatic ER	Adult	*In vitro*	Lab		24 h		4	IC50 = 30.2 µM	
353	4423	65	Amphibian	Xenopus laevis (African clawed frog)	Hepatic ER	Adult	*In vitro*	Lab		24 h		4	IC50 = 33.7 µM	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
353	4424	513	Amphibian	Xenopus laevis (African clawed frog)	Hepatic ER	Adult	*In vitro*	Lab		24 h		4	IC50 = 35 µM	
353	4425	529	Amphibian	Xenopus laevis (African clawed frog)	Hepatic ER	Adult	*In vitro*	Lab		24 h		4	IC50 = 78.3 µM	
353	4426	241	Amphibian	Xenopus laevis (African clawed frog)	Hepatic ER	Adult	*In vitro*	Lab		24 h		4	IC50 = 1.03 mM	
353	4427	464	Amphibian	Xenopus laevis (African clawed frog)	Hepatic ER	Adult	*In vitro*	Lab		24 h		4		Estrogenic activity of various dilutions of sewage effluents
364	4495	380	Amphibian	Xenopus laevis (African clawed frog)		Larva (2-3 d)	*In vivo*	Lab	Semi-static	12 w	Water	22-23	10-100 nM	
364	4496	65	Amphibian	Xenopus laevis (African clawed frog)		Larva (2-3 d)	*In vivo*	Lab	Semi-static	12 w	Water	22-23	100 nM	Dose range: 10-100 nM
364	4497	157	Amphibian	Xenopus laevis (African clawed frog)		Larva (2-3 d)	*In vivo*	Lab	Semi-static	12 w	Water	22-23	100 nM	Dose range: 10-100 nM
364	4498	513	Amphibian	Xenopus laevis (African clawed frog)		Larva (2-3 d)	*In vivo*	Lab	Semi-static	12 w	Water	22-23	100 nM	Dose range: 10-100 nM
364	4499	529	Amphibian	Xenopus laevis (African clawed frog)		Larva (2-3 d)	*In vivo*	Lab	Semi-static	12 w	Water	22-23	10-100 nM	
370	4522	313	Amphibian	Xenopus laevis (African clawed frog)		Embryo	*In vivo*	Lab	Semi-static	4 d	Water	23	400-500 ng/l	Dose range: 200-500 ng/l
370	4523	313	Amphibian	Xenopus laevis (African clawed frog)		Embryo	*In vivo*	Lab	Semi-static	5 d	Water	23	0.1-50 ng/l	
364	4492	380	Amphibian	Xenopus laevis (African clawed frog), male	Hepatocytes	Adult	*In vitro*	Lab		36 h		20	1 nM - 10 µM	Dose range: 0.1 nM - 10 µM
364	4493	65	Amphibian	Xenopus laevis (African clawed frog), male	Hepatocytes	Adult	*In vitro*	Lab		36 h		20	0.01-10 µM	Dose range: 0.1 nM - 10 µM
364	4494	157	Amphibian	Xenopus laevis (African clawed frog), male	Hepatocytes	Adult	*In vitro*	Lab		36 h		20	0.1-10 µM	Dose range: 0.1 nM - 10 µM

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
12	2479	221	Annelid	Eisenia andrei (Earthworm)		8.5-15.5 w	*In vivo*	Lab		3 w	Soil	20	LOEL = 1.92 mg/kg (DW)	
129	2723	257	Bird	Aix sponsa (Wood duck), female		Adult	*In vivo*	Field		21 d	Field application		1.4 kg a.i/ha	
129	2724	257	Bird	Anas discors (Teal), female		Adult	*In vivo*	Field		21 d	Field application		1.4 kg a.i/ha	
47	2539	229	Bird	Anas platyrhynchos (Mallard duck)			*In vivo*	Lab	12 w-oviposition period		Food		LOEL = 3 mg/kg	Concentration range: 0.5-3 mg/kg
60	2566	231	Bird	Anas platyrhynchos (Mallard duck)			*In vivo*	Lab			Food		NOEL > 10	
109	2680	250	Bird	Anas platyrhynchos domesticus (Domestic duck)		Adult, laying	*In vivo*	Lab		8 w	Food		20 mg/kg body weight	Dosing daily, twice and three times a week
378	4599	151	Bird	Beijing White, female		Adult (12 m)	*In vivo*	Lab		7-14 d	Oral	20	750 mg/kg	Single dose
60	2565	231	Bird	Bobwhite quail			*In vivo*	Lab			Food		NOEL > 40 mg/kg	
53	2550	230	Bird	Chicken	Oviduct nuclei		*In vitro*	Lab					Binding affinity relative to estradiol	
68	2583	238	Bird	Chicken		28 w	*In vivo*	Lab		20 w	Oral		18.7 mg/bird	
69	2584	238	Bird	Chicken			*In vivo*	Lab		7 m	Drinking water		1000 mg/l	
72	2588	238	Bird	Chicken		Eggs	*In vivo*	Lab		In ovo; prior to incubation			up to 15 times recommended field application	Recommended field application: 3 kg/ha
73	2589	238	Bird	Chicken		Eggs	*In vivo*	Lab		In ovo; days 0, 4, 18 of incubation			up to 10 times recommended field application	Recommended field application: 3 kg/ha

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
74	2590	238	Bird	Chicken		Eggs	*In vivo*	Lab		In ovo; days 0, 4, 18 of incubation			up to 10 times recommended field application	Recommended field application: 3 kg/ha
28	2508	225	Bird	Chicken, Rooster white leghorn	Liver	3 w	*In vivo*	Lab		3 d	Perinatally		19 mg/kg body weight	
28	2554	230	Bird	Chicken, Rooster white leghorn	Liver	3 w	*In vivo*	Lab		3 d	Intramuscular injection		24.5 mg/kg	
28	2580	236	Bird	Chicken, Rooster white leghorn	Liver	3 w	*In vivo*	Lab		3 d	Perinatally		121 mg/kg body weight	
28	2663	236	Bird	Chicken, Rooster white leghorn	Liver	3 w	*In vivo*	Lab		3 d	Intramuscular		14.54 mg/kg body weight	
61	2567	231	Bird	Chicken, White leghorn			*In vivo*	Lab		12 w	Food		NOEL > 160 mg/kg	Concentration range: 5-160 mg/kg
121	2700	254	Bird	Cockerel		1 month	*In vivo*	Lab		15 d	Oral		5-15 mg/kg body weight/d	
366	4501	383	Bird	Coturnix japonica (Japanese quail)		Egg	*In vivo*	Lab		15 d	In ovo	37.5	2-170 ng/g	Dosing on day 3 of incubation
366	4502	382	Bird	Coturnix japonica (Japanese quail)		Egg	*In vivo*	Lab		15 d	In ovo	37.5	2-57 ng/g	Dosing on day 3 of incubation; dose range: 0.7-57 ng/g
248	3756	358	Bird	Duck	PR	Adult	*In vitro*	Lab					1.1-110 µM	Progesterone receptor assay; Cytoplasmatic PR in the eggshell gland mucosa
248	3757	415	Bird	Duck	PR	Adult	*In vitro*	Lab					1.1-110 µM	Progesterone receptor assay; Cytoplasmatic PR in the eggshell gland mucosa
248	3758	301	Bird	Duck	PR	Adult	*In vitro*	Lab					1.1-110 µM	Progesterone receptor assay; Cytoplasmatic PR in the eggshell gland mucosa

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
248	3759	223	Bird	Duck	PR	Adult	*In vitro*	Lab					1.1-110 µM	Progesterone receptor assay; Cytoplasmatic PR in the eggshell gland mucosa
82	2609	243	Bird	Falco sparverius (American kestrel)			*In vivo*	Lab		2 g	Oral		5 and 20 mg/kg	
83	2610	243	Bird	Falco sparverius (American kestrel)			*In vivo*	Lab		2 g	Oral		5 and 20 mg/kg	
77	2596	240	Bird	Gull			*In vivo*	Field			Environmental contamination			Technical DDT (clofenotane)
61	2568	231	Bird	Japanese quail			*In vivo*	Lab		12 w	Food		NOEL > 160 mg/kg	Concentration range: 5-160 mg/kg
274	3946	382	Bird	Japanese quail		Egg	*In vivo*	Lab		Until sexual maturity	In ovo	37.5	6 ng/g egg	Dose range: 2-6 ng/g; single dose on day 3 of incubation; injection into yolk
274	3947	383	Bird	Japanese quail		Egg	*In vivo*	Lab		Until sexual maturity	In ovo	37.5	19-57 ng/g egg	Dose range: 6-57 ng/g egg; single dose on day 3 of incubation; injection into yolk
228	3543	313	Bird	Larus argentatus (Herring gull)		eggs	*In vivo*	Field		24-26 d	Environmental contamination	37.5	< 1 ng/g wet weight	PCDD/PCDF fraction in yolk sac; field collected embryos artificially incubated in the lab
228	3544	292	Bird	Larus argentatus (Herring gull)		eggs	*In vivo*	Field		24-26 d	Environmental contamination	37.5	20-45 µg/g wet weight (total PCBs)	Total PCB > 60% of total residues; PCB 153 dominant PCB of total PCB fraction in yolk sac; field collected embryos artificially incubated in the lab
228	3545	470	Bird	Larus argentatus (Herring gull)		eggs	*In vivo*	Field		24-26 d	Environmental contamination	37.5	20-45 µg/g wet weight (non-ortho PCBs)	Total PCB > 60% of total residues; PCB 126 > 75% of non-ortho PCB fraction in yolk sac; field collected embryos artificially incubated in the lab
84	2613	241	Bird	Larus californicus (Californian gull)		Eggs	*In vivo*	Lab			Injection in yolk		100 ppm	Concentration range: 2-100 ppm

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
78	2597	241	Bird	Pigeon	Thyroid		*In vivo*	Field					6 mg/kg body weight/d	
130	2725	257	Bird	Sturnus vulgaris (Wild starling)		Adult and nestlings	*In vivo*	Field		7 d	Field applicatio n		1.4 kg a.i/ha	
301	4145	289	Bird	Tachycineta bicolor (Tree swallow)		Adult	*In vivo*	Field			Environmental contamination		Eggs: up to 29.5 µg/g	
248	3760	358	Bird	White leghorn	PR	Adult	*In vitro*	Lab					1.1-110 µM	Progesterone receptor assay; Cytoplasmatic PR in the eggshell gland mucosa
248	3761	415	Bird	White leghorn	PR	Adult	*In vitro*	Lab					1.1-110 µM	Progesterone receptor assay; Cytoplasmatic PR in the eggshell gland mucosa
248	3762	301	Bird	White leghorn	PR	Adult	*In vitro*	Lab					11-110 µM	Progesterone receptor assay; Cytoplasmatic PR in the eggshell gland mucosa; concentration range: 1.1-110 µM
248	3763	223	Bird	White leghorn	PR	Adult	*In vitro*	Lab					11-110 µM	Progesterone receptor assay; Cytoplasmatic PR in the eggshell gland mucosa; concentration range: 1.1-110 µM
248	3768	605	Bird	White leghorn	PR	Adult	*In vitro*	Lab					0.1-0.5 mM	Progesterone receptor assay; Cytoplasmatic PR in the eggshell gland mucosa; concentration range: 1-500 µM
248	3769	604	Bird	White leghorn	PR	Adult	*In vitro*	Lab					0.05-0.5 mM	Progesterone receptor assay; Cytoplasmatic PR in the eggshell gland mucosa; concentration range: 1-500 µM
317	4282	380	Crustacean	Acartia tonsa		Eggs (< 8 h)	*In vivo*	Lab	Semi-static	12 d	Food	20	23 µg/l	
317	4283	157	Crustacean	Acartia tonsa		Eggs (< 8 h)	*In vivo*	Lab	Semi-static	12 d	Food	20	20 µg/l	Dose range: 0.2-20 µg/l
261	3812	65	Crustacean	Balanus amphitrite (Barnacle)		3 d	*In vivo*	Lab	Static	24 h	Water	25	0.693-7.127 µg/l	Dose range: 0.1-10 µg/l (nominal), 0.023-7.127 (measured)

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
261	3813	65	Crustacean	Balanus amphitrite (Barnacle)		3 d	*In vivo*	Lab	Static	24 h	Water	28	0.693-7.127 µg/l	Dose range: 0.1-10 µg/l (nominal), 0.023-7.127 (measured)
261	3814	65	Crustacean	Balanus amphitrite (Barnacle)		3 d	*In vivo*	Lab	Static	48 h	Water	28	0.059-7.127 µg/l	Dose range: 0.1-10 µg/l (nominal), 0.023-7.127 (measured)
261	3815	380	Crustacean	Balanus amphitrite (Barnacle)		3 d	*In vivo*	Lab	Static	24 h	Water	25	0.1-10 µg/l	
261	3816	65	Crustacean	Balanus amphitrite (Barnacle)		2 d	*In vivo*	Lab	Semi-static	96 h	Water	25	0.693-7.127 µg/l	Dose range: 0.1-10 µg/l (nominal), 0.023-7.127 (measured)
261	3817	380	Crustacean	Balanus amphitrite (Barnacle)		2 d	*In vivo*	Lab	Semi-static	96 h	Water	25	0.1-1 µg/l	
262	3818	65	Crustacean	Balanus amphitrite (Barnacle)		Nauplii	*In vivo*	Lab	Semi-static	6 d	Water	28	0.01-1 µg/l	
262	3819	380	Crustacean	Balanus amphitrite (Barnacle)		Nauplii	*In vivo*	Lab	Semi-static	6 d	Water	28	1 µg/l	
335	4363	330	Crustacean	Callinectes sapidus (Blue crab), female		Mature	*In vivo*	Lab	Flow through	16 d	Food	22	125-500 µg/kg	Feeding of injected fish every other day
335	4364	330	Crustacean	Callinectes sapidus (Blue crab), female	Hepatopancreas	Mature	*In vitro*	Lab		1 h		21	57-5700 µg/l	
259	3803	65	Crustacean	Corophium volutator		Juvenile (< 5 d)	*In vivo*	Lab	Semi-static	120 d	Water	15	10-200 µg/l	
131	2726	257	Crustacean	Daphnia magna			*In vivo*	Lab	Semi-static	21 d	Water	20	NOEC = 0.2 ng/l	
265	3865	383	Crustacean	Daphnia magna		Neonatal (< 24 h)	*In vivo*	Lab	Semi-static	Multi-g	Water	22	0.5 mg/l	Dose range: 0.031-0.5 mg/l
265	3866	383	Crustacean	Daphnia magna		Adult (12 d)	*In vivo*	Lab	Static	48 h	Water	22	0.5 mg/l	
268	3925	641	Crustacean	Daphnia magna		Adult (13 d)	*In vivo*	Lab	Static	72 h	Water	22	197 µM	Dose equivalent to 50 mg/l
268	3926	642	Crustacean	Daphnia magna		Adult (13 d)	*In vivo*	Lab	Static	72 h	Water	22	1.84-3.67 µM	Dose equivalent to 0.5-1 mg/l
268	3927	643	Crustacean	Daphnia magna		Adult (13 d)	*In vivo*	Lab	Static	24 h	Water	22	0.295 µM	Dose equivalent to 0.1 mg/l

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
268	3928	256	Crustacean	Daphnia magna		Adult (13 d)	*In vivo*	Lab	Static	24 h	Water	22	3.13 nM	Dose equivalent to 1 µg/l
269	3930	65	Crustacean	Daphnia magna		Neonatal (< 24 h)	*In vivo*	Lab	Semi-static	3 w	Water	22	100 µg/l	Dose range: 6.2-100 µg/l
270	3931	383	Crustacean	Daphnia magna		Neonatal (< 24 h)	*In vivo*	Lab	Semi-static	6 d	Water	20	3 µM	Dose range: 0.75-3 µM
270	3932	600	Crustacean	Daphnia magna		Neonatal (< 24 h)	*In vivo*	Lab	Semi-static	6 d	Water	20	0.08 µM	Dose range: 0.08-0.32 µM
270	3933	644	Crustacean	Daphnia magna		Neonatal (< 24 h)	*In vivo*	Lab	Semi-static	6 d	Water	20	6.2-12 µM	Dose range: 6.2-25 µM
279	3984	65	Crustacean	Daphnia magna		Neonatal (< 24 h)	*In vivo*	Lab	Semi-static	21 d	Water	21.6	25 µg/l	
279	3985	355	Crustacean	Daphnia magna		Neonatal (< 24 h)	*In vivo*	Lab	Semi-static	21 d	Water	21.6	1 µg/l	
279	3986	240	Crustacean	Daphnia magna		Neonatal (< 24 h)	*In vivo*	Lab	Semi-static	21 d	Water	21.6	1 µg/l	
279	3987	327	Crustacean	Daphnia magna		Neonatal (< 24 h)	*In vivo*	Lab	Semi-static	21 d	Water	21.6	1 µg/l	
279	3988	380	Crustacean	Daphnia magna		Neonatal (< 24 h)	*In vivo*	Lab	Semi-static	21 d	Water	21.6	270 µg/l	
269	3929	65	Crustacean	Daphnia magna, parthenogenetic female		Adult (10 d)	*In vivo*	Lab	Static	48 h	Water	22	25-100 µg/l	
318	4284	464	Crustacean	Daphnia sp.			*In vivo*	Field			Environmental comtamination			Measured effect probably a combination of environmental conditions and chemical exposure
168	2976	464	Crustacean	Monoporeia affinis, female		Adult	*In vivo*	Field			Environmental concentration			Field sampling near kraft pulp mills ((un)bleached sulphate pulp and unbleached recycled fiber pulp production) and an aluminum smeltery (high PAH emission)

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
210	3375	478	Crustacean	Palaemonetes pugio (Grass shrimp)			*In vivo*	Lab	Flow through	6 w	Water	27	63.4 µg/l	Concentration range: 5.1, 15 and 63.4 µg/l; 6 weeks exposure plus 6 weeks reproductive phase in clean seawater
255	3796	464	Crustacean	Paramphiascella hyperborea		Adult	*In vivo*	Field			Environmental concentration			Sites receiving industrial and domestic effluents
256	3797	464	Crustacean	Paramphiascella hyperborea		Adult	*In vivo*	Field			Environmental concentration			Sites receiving industrial and domestic effluents
256	3798	464	Crustacean	Stenhelia gibba		Adult	*In vivo*	Field			Environmental concentration			Sites receiving industrial and domestic effluents
257	3799	380	Crustacean	Tisbe battagliai		Nauplii (< 24 h)	*In vivo*	Lab	Semi-static	21 d	Water	20	0.1-100 µg/l	
257	3800	378	Crustacean	Tisbe battagliai		Nauplii (< 24 h)	*In vivo*	Lab	Semi-static	21 d	Water	20	0.1-100 µg/l	
257	3801	382	Crustacean	Tisbe battagliai		Nauplii (< 24 h)	*In vivo*	Lab	Semi-static	21 d	Water	20	0.1-100 µg/l	
258	3802	65	Crustacean	Tisbe battagliai		Nauplii (< 24 h)	*In vivo*	Lab	Semi-static	up to 8 w	Water	10	31-500 µg/l	
271	3934	383	Crustacean	Tisbe battagliai		Nauplii (< 24 h)	*In vivo*	Lab	Semi-static	21 d	Water	20	0.1-100 µg/l	
271	3935	645	Crustacean	Tisbe battagliai		Nauplii (< 24 h)	*In vivo*	Lab	Semi-static	21 d	Water	20	8.7-269 µg/l	
257	3936	645	Crustacean	Tisbe battagliai		Nauplii (< 24 h)	*In vivo*	Lab	Semi-static	21 d	Water	20	8.7-269 µg/l	
401	4656	282	Crustacean	Uca pugilator (Fiddler crab)		Intermolt stage	*In vivo*	Lab	Semi-static	7 d	Water	19-21	50 mg/l	Dose range: 15 and 50 mg/l
401	4657	277	Crustacean	Uca pugilator (Fiddler crab)		Intermolt stage	*In vivo*	Lab	Semi-static	7 d	Water	19-21	10 mg/l	Dose range: 2 and 10 mg/l

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
401	4658	772	Crustacean	Uca pugilator (Fiddler crab)		Intermolt stage	*In vivo*	Lab	Semi-static	7 d	Water	19-21	0.5-2 mg/l	
332	4350	327	Echinoderm	Leptasterias polaris (Sea star)		Adult	*In vivo*	Lab	Flow through	53 d	Food	10-13	Mean amount ingested over 53 ds: 657 µg	
306	4178	465	Fish		Head kidney	Juvenile	*In vitro*	Lab		5 h			25-100 mg/l	
128	2721	257	Fish	Anabas testudineus (freshwater Perch)		Pre-spawning	*In vivo*	Lab	Flow through	90 d	Water		0.106 ppb	Pesticide: Metacid-50; Exposure covering pre-spawning and spawning phase
128	2722	367	Fish	Anabas testudineus (freshwater Perch)		Pre-spawning	*In vivo*	Lab	Flow through	90 d	Water		1.66 ppm	Exposure covering pre-spawning and spawning phase
125	2711	256	Fish	Brachydanio rerio (Zebrafish), female	Ovary		*In vivo*	Lab	Semi-static	7 d	Water		0.5-1.1 mg/l	Reversible effects
390	4620	380	Fish	Brachydanio rerio (Zebrafish), female		Adult	*In vivo*	Lab		10-30 d	Injection	28	1 µmol/kg	Females were mated 10 days after injection with uninjected males
390	4621	468	Fish	Brachydanio rerio (Zebrafish), female		Adult	*In vivo*	Lab		10-30 d	Injection	28	1 µmol/kg	Females were mated 10 days after injection with uninjected males
390	4622	467	Fish	Brachydanio rerio (Zebrafish), female		Adult	*In vivo*	Lab		10-30 d	Injection	28	1 µmol/kg	Females were mated 10 days after injection with uninjected males
390	4623	472	Fish	Brachydanio rerio (Zebrafish), female		Adult	*In vivo*	Lab		10-30 d	Injection	28	1 µmol/kg	Females were mated 10 days after injection with uninjected males
390	4624	466	Fish	Brachydanio rerio (Zebrafish), female		Adult	*In vivo*	Lab		10-30 d	Injection	28	1 µmol/kg	Females were mated 10 days after injection with uninjected males
111	2683	250	Fish	Carassius auratus (Goldfish)		Pre-spawning phase	*In vivo*	Lab	Flow through	4 w	Water		0.01-1 ppm	
111	2684	250	Fish	Carassius auratus (Goldfish)	Gonad		*In vitro*	Lab					0.01-1 ppm	Gonadal tissue from fish exposed to lindane for 4 weeks incubated with carp hypophyseal homogenate

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
112	2685	250	Fish	Carassius auratus (Goldfish)	Liver	Pre-spawning phase	*In vivo*	Lab	Semi-static	4 w	Water		0.01-1 ppm	
291	4083	355	Fish	Carassius auratus (Goldfish)	AR		*In vitro*	Lab					up to 25 µM	Competitive binding studies using cytosolic fractions from brain and gonads
291	4084	354	Fish	Carassius auratus (Goldfish)	AR		*In vitro*	Lab					up to 25 µM	Competitive binding studies using cytosolic fractions from brain and gonads
291	4085	242	Fish	Carassius auratus (Goldfish)	AR		*In vitro*	Lab					up to 25 µM	Competitive binding studies using cytosolic fractions from brain and gonads
291	4086	415	Fish	Carassius auratus (Goldfish)	AR		*In vitro*	Lab					up to 25 µM	Competitive binding studies using cytosolic fractions from brain and gonads
291	4087	358	Fish	Carassius auratus (Goldfish)	AR		*In vitro*	Lab					up to 25 µM	Competitive binding studies using cytosolic fractions from brain and gonads
291	4088	595	Fish	Carassius auratus (Goldfish)	AR		*In vitro*	Lab					up to 50 µM	Competitive binding studies using cytosolic fractions from brain and gonads
291	4089	571	Fish	Carassius auratus (Goldfish)	AR		*In vitro*	Lab					up to 50 µM	Competitive binding studies using cytosolic fractions from brain and gonads
291	4090	245	Fish	Carassius auratus (Goldfish)	AR		*In vitro*	Lab					up to 50 µM	Competitive binding studies using cytosolic fractions from brain and gonads
291	4091	400	Fish	Carassius auratus (Goldfish)	AR		*In vitro*	Lab					up to 50 µM	Competitive binding studies using cytosolic fractions from brain and gonads
291	4092	401	Fish	Carassius auratus (Goldfish)	AR		*In vitro*	Lab					up to 50 µM	Competitive binding studies using cytosolic fractions from brain and gonads
398	4646	464	Fish	Carassius carassius (Crucian carp)			*In vivo*	Field		Environmental contamination				Fish collected in wastewater pond of pulp mill; exposure to organic chlorine compounds, resin acids and beta-sitosterol
34	2518	226	Fish	Channa striatus (Teleost)	Ovary		*In vivo*	Lab	Semi-static	2-30 d	Water		750 µg/l	Technical endosulfan (Thiodan)
35	2519	226	Fish	Channa striatus (Teleost)	Testis		*In vivo*	Lab	Semi-static	2-30 d	Water		750 µg/l	Technical endosulfan (Thiodan)

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
113	2686	250	Fish	Clarias batrachus (Catfish), female		Vitellogenic	*In vivo*	Lab	Semi-static	4 w	Water		8 ppm	
113	2703	256	Fish	Clarias batrachus (Catfish), female		Vitellogenic	*In vivo*	Lab	Semi-static	4 w	Water		4 ppm	
169	2977	230	Fish	Cynoscion nebulosus (Spotted seatrout), female	Ovary	Adult	*In vitro*	Lab					1-100 µM	Concentration range: 0.001-100 µM
169	2978	465	Fish	Cynoscion nebulosus (Spotted seatrout), female	Ovary	Adult	*In vitro*	Lab					1-100 µM	Concentration range: 0.001-100 µM
45	2537	229	Fish	Cyprinodon variegatus (Sheepshead minnow)			*In vivo*	Lab	Flow through	23 w	Water		NOEC = 0.12 µg/l	Concentration range: 0.027-0.72 µg/l
51	2545	230	Fish	Cyprinodon variegatus (Sheepshead minnow)			*In vivo*	Lab		141 d	Water		70 µg/l	
11	2477	221	Fish	Cyprinus carpio (Common carp)			*In vivo*	Lab	Semi-static		Water		LC100 < 2.5 mg/l	
31	2515	226	Fish	Cyprinus carpio (Common carp)	Oocytes		*In vitro*	Lab		1.5 d		25	0.01-0.5 ppb	
31	2712	256	Fish	Cyprinus carpio (Common carp)	Oocytes		*In vitro*	Lab		1.5 d		25	50-1000 ppb	
348	4381	730	Fish	Cyprinus carpio (Common carp), male		50 d (sexual differentiation)	*In vivo*	Lab	Flow through	up to 90 d	Water	25	36-256 µg/l	Exclusively genetic males (XY)
349	4382	730	Fish	Cyprinus carpio (Common carp), male		210 d (sexual mature)	*In vivo*	Lab	Flow through	3 m	Water	25	32-1000 µg/l	Exclusively genetic males (XY)
404	4662	464	Fish	Cyprinus carpio (Common carp), male			*In vivo*	Field		Environmental contamination				Fish collected from an effluent channel below a sewage treatment plant
404	4663	464	Fish	Cyprinus carpio (Common carp), male			*In vivo*	Field		Environmental contamination				Fish collected at sites receiving agricultural runoff
403	4660	727	Fish	Danio rerio (Zebrafish), male		Adult	*In vivo*	Lab	Static	48 h	Water	25	1 µM	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
403	4661	380	Fish	Danio rerio (Zebrafish), male		Adult	*In vivo*	Lab	Static	48 h	Water	25	1 µM	
170	2979	466	Fish	Danio rerio (Zebrafish)		Adult	*In vivo*	Lab		2 g study	Maternal transfer	28	1 µmol/kg	Parent fish injected
170	2980	467	Fish	Danio rerio (Zebrafish)		Adult	*In vivo*	Lab		2 g study	Maternal transfer	28	1 µmol/kg	Parent fish injected
170	2981	468	Fish	Danio rerio (Zebrafish)		Adult	*In vivo*	Lab		2 g study	Maternal transfer	28	1 µmol/kg	Parent fish injected
170	2982	380	Fish	Danio rerio (Zebrafish)		Adult	*In vivo*	Lab		2 g study	Maternal transfer	28	1 µmol/kg	Parent fish injected; concentration range: 0.001-1 µmol/kg
171	2984	468	Fish	Danio rerio (Zebrafish)		Adult	*In vivo*	Lab		8 d	Injection	28	1 µmol/kg	
171	2989	475	Fish	Danio rerio (Zebrafish)		Adult	*In vivo*	Lab		8 d	Injection	28	1 µmol/kg	
171	2992	474	Fish	Danio rerio (Zebrafish)		Adult	*In vivo*	Lab		8 d	Injection	28	1 µmol/kg	
171	2993	380	Fish	Danio rerio (Zebrafish)		Adult	*In vivo*	Lab		8 d	Injection	28	1 nmol/kg	
365	4500	382	Fish	Danio rerio (Zebrafish)		Adult	*In vivo*	Lab		12 d	Water		5 ng/l	
171	2983	467	Fish	Danio rerio (Zebrafish), female		Adult	*In vivo*	Lab		8 d	Injection	28	1 µmol/kg	
171	2985	466	Fish	Danio rerio (Zebrafish), female		Adult	*In vivo*	Lab		8 d	Injection	28	1 µmol/kg	
171	2986	469	Fish	Danio rerio (Zebrafish), female		Adult	*In vivo*	Lab		8 d	Injection	28	1 µmol/kg	
171	2987	470	Fish	Danio rerio (Zebrafish), female		Adult	*In vivo*	Lab		8 d	Injection	28	1 µmol/kg	
171	2988	471	Fish	Danio rerio (Zebrafish), female		Adult	*In vivo*	Lab		8 d	Injection	28	1 µmol/kg	
171	2990	472	Fish	Danio rerio (Zebrafish), female		Adult	*In vivo*	Lab		8 d	Injection	28	1 µmol/kg	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
171	2991	473	Fish	Danio rerio (Zebrafish), female		Adult	*In vivo*	Lab		8 d	Injection	28	1 µmol/kg	
292	4103	278	Fish	Fundulus heteroclitus (Killifish)		Four-cell stage embryo	*In vivo*	Lab	Semi-static	10 d	Water	20	10-100 µM	
292	4104	277	Fish	Fundulus heteroclitus (Killifish)		Four-cell stage embryo	*In vivo*	Lab	Semi-static	10 d	Water	20	10-100 µM	
292	4105	278	Fish	Fundulus heteroclitus (Killifish)		Larva	*In vivo*	Lab	Semi-static	96 h	Water	20	0.5-4 µM	
292	4106	277	Fish	Fundulus heteroclitus (Killifish)		Larva	*In vivo*	Lab	Semi-static	96 h	Water	20	0.5-4 µM	
302	4146	464	Fish	Fundulus heteroclitus (Mummichog)		Adult (2-3 y)	*In vivo*	Field			Environmental contamination			Site polluted with heavy metals (Hg, Pb, Cu, Zn,Cr, Cd) and organic chemicals (PCBs, PAH, DDTs)
284	3998	464	Fish	Gambusia affinis holbrooki (Mosquitofish), male			*In vivo*	Field			Environmental contamination			Fish sampled near sewage treatment plant discharge points
294	4110	375	Fish	Goldfish		Sexually mature	*In vivo*	Lab	Semi-static	12 d	Water	12-14	300-1200 µg/l	
294	4111	375	Fish	Goldfish	Testes	Sexually mature	*In vitro*	Lab	Semi-static	12 d	Water	12-14	300-1200 µg/l	Testes from in vivo exposed fish
294	4112	380	Fish	Goldfish		Sexually mature	*In vivo*	Lab	Semi-static	12 d	Water	12-14	75-300 µg/l	
396	4643	464	Fish	Goldfish	Testes	Sexually mature	*In vivo*	Field		16-21 d	Water	16-18	100%	Exposure to bleached sulphite mill effluent on-site
16	2484	222	Fish	Heteropneustes fossilis (Catfish)			*In vivo*	Lab	Semi-static	28 d	Water		0.85 mg/l	
117	2691	250	Fish	Heteropneustes fossilis (Catfish)			*In vivo*	Lab	Semi-static	4 w	Water		8 ppm	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
117	2692	250	Fish	Heteropneustes fossilis (Catfish)			*In vivo*	Lab	Semi-static	4 w	Water		16 ppm	
117	2709	256	Fish	Heteropneustes fossilis (Catfish)			*In vivo*	Lab	Semi-static	4 w	Water		10 and 20 ppm	
16	2719	257	Fish	Heteropneustes fossilis (Catfish)			*In vivo*	Lab	Semi-static	28 d	Water		32 mg/l	Insecticede: Paramar M 50
114	2687	250	Fish	Heteropneustes fossilis (Catfish), female		Preparatory and pre-spawning phase	*In vivo*	Lab	Semi-static	4 w	Water		16 mg/l	
115	2688	250	Fish	Heteropneustes fossilis (Catfish), female		Preparatory and pre-spawning phase	*In vivo*	Lab	Semi-static	4 w	Water		16 mg/l	
17	2485	222	Fish	Heteropneustus fossilis			*In vivo*	Lab	Semi-static	28 d	Water		0.85 mg/l	
17	2720	257	Fish	Heteropneustus fossilis			*In vivo*	Lab	Semi-static	28 d	Water		32 mg/l	Insecticede: Paramar M 50
48	2540	229	Fish	Heteropneustus fossilis (Catfish)			*In vivo*	Lab	Semi-static	28 d	Water		0.008 mg/l	Hexadrin (20% endrin)
48	2541	229	Fish	Heteropneustus fossilis (Catfish)			*In vivo*	Lab	Semi-static	4 d	Water		0.006 mg/l	Hexadrin (20% endrin)
49	2542	229	Fish	Heteropneustus fossilis (Catfish)			*In vivo*	Lab	Semi-static	28 d	Water		0.006 mg/l	Hexadrin (20% endrin)
17	2543	229	Fish	Heteropneustus fossilis (Catfish)			*In vivo*	Lab	Semi-static	28 d	Water		0.008 mg/l	Hexadrin (20% endrin)
49	2710	256	Fish	Heteropneustus fossilis (Catfish)			*In vivo*	Lab	Semi-static	28 d	Water		0.006 mg/l	
161	2836	65	Fish	Ictalurus punctatus (Channel catfish)		2 y	*In vivo*	Lab	Flow through	10 d	Intraperitoneal	23-25	60.5 mg/kg	Dosing on day 1,4 and 7

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
161	2837	381	Fish	Ictalurus punctatus (Channel catfish)		2 y	*In vivo*	Lab	Flow through	10 d	Intraperitoneal	23-25	0.6 mg/kg	Dosing on day 1,4 and 7
161	2824	65	Fish	Ictalurus punctatus (Channel catfish), female	Liver	2 y	*In vitro*	Lab		5 h	Room temperature		IC50 = 4.53 µM	
161	2825	382	Fish	Ictalurus punctatus (Channel catfish), female	Liver	2 y	*In vitro*	Lab		5 h	Room temperature		IC50 = 0.43 nM	
161	2826	381	Fish	Ictalurus punctatus (Channel catfish), female	Liver	2 y	*In vitro*	Lab		5 h	Room temperature		IC50 = 2.2 nM	
161	2827	383	Fish	Ictalurus punctatus (Channel catfish), female	Liver	2 y	*In vitro*	Lab		5 h	Room temperature		IC50 = 2.45 nM	
161	2828	397	Fish	Ictalurus punctatus (Channel catfish), female	Liver	2 y	*In vitro*	Lab		5 h	Room temperature		IC50 = 41.21 nM	
161	2829	413	Fish	Ictalurus punctatus (Channel catfish), female	Liver	2 y	*In vitro*	Lab		5 h	Room temperature		IC50 = 717 nM	
161	2830	230	Fish	Ictalurus punctatus (Channel catfish), female	Liver	2 y	*In vitro*	Lab		5 h	Room temperature		IC50 = 8.05 µM	
161	2831	355	Fish	Ictalurus punctatus (Channel catfish), female	Liver	2 y	*In vitro*	Lab		5 h	Room temperature		IC50 = 14.23 µM	
161	2832	242	Fish	Ictalurus punctatus (Channel catfish), female	Liver	2 y	*In vitro*	Lab		5 h	Room temperature		IC50 = 17.79 µM	
161	2833	414	Fish	Ictalurus punctatus (Channel catfish), female	Liver	2 y	*In vitro*	Lab		5 h	Room temperature		IC50 = 19.35 µM	
161	2834	415	Fish	Ictalurus punctatus (Channel catfish), female	Liver	2 y	*In vitro*	Lab		5 h	Room temperature		IC50 = 40.6 µM	
161	2835	416	Fish	Ictalurus punctatus (Channel catfish), female	Liver	2 y	*In vitro*	Lab		5 h	Room temperature		IC50 = 2.01 µM	
181	3030	355	Fish	Ictalurus punctatus (Channel catfish), female	Liver	14 m	*In vitro*	Lab					IC50 = 78 µM	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
181	3031	416	Fish	Ictalurus punctatus (Channel catfish), female	Liver	14 m	*In vitro*	Lab					IC50 = 1.8 µM	
181	3032	354	Fish	Ictalurus punctatus (Channel catfish), female	Liver	14 m	*In vitro*	Lab					IC50 = 3 µM	
181	3033	380	Fish	Ictalurus punctatus (Channel catfish), female	Liver	14 m	*In vitro*	Lab					IC50 = 0.0017 µM	
181	3034	380	Fish	Ictalurus punctatus (Channel catfish), male		14 m	*In vivo*	Lab		10 d	Intraperitoneal		0.6 mg/kg	
181	3035	355	Fish	Ictalurus punctatus (Channel catfish), male		14 m	*In vivo*	Lab		10 d	Intraperitoneal		250 mg/kg	
181	3036	416	Fish	Ictalurus punctatus (Channel catfish), male		14 m	*In vivo*	Lab		10 d	Intraperitoneal		100 mg/kg	
46	2538	229	Fish	Jordanella floridae (Flagfish)			*In vivo*	Lab	Semi-static	30 d	Water		LOEC = 0.29 µg/l	Concentration range: 0.21-.039 µg/l
70	2586	238	Fish	Lepomis macrochirus (Bluegill)			*In vivo*	Lab		150 d	Water		5 mg/l	Concentration range: 0.1-10 mg:l
392	4632	380	Fish	Micropogonias undulatus (Atlantic croaker)			*In vivo*	Lab		5 d	Intraperitoneal		0.1 µg/g body weight	Dosing on alternate days during early phase of gonadal recrudescence
392	4633	380	Fish	Micropogonias undulatus (Atlantic croaker)			*In vivo*	Lab		5 d	Silastic capsule implant		10 µg/g body weight	Dosing during late-recrudescence phase of gonadal development
392	4634	242	Fish	Micropogonias undulatus (Atlantic croaker)			*In vivo*	Lab		3 w	Food		0.02-0.1 µg/g body weight/d	Dosing during early-recrudescence phase of gonadal development
392	4635	242	Fish	Micropogonias undulatus (Atlantic croaker)			*In vivo*	Lab		7 w	Food		0.02 µg/g body weight/d	Dosing from early-recrudescence phase of gonadal development to fully recrudesced gonads; dose range: 0.02-0.1 µg
395	4638	230	Fish	Micropogonias undulatus (Atlantic croaker), male	20-beta-S receptor		*In vitro*	Lab				4	0.1-10 µM	Competitive binding assay

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
395	4639	415	Fish	Micropogonias undulatus (Atlantic croaker), male	20-beta-S receptor		*In vitro*	Lab				4	1-100 µM	Competitive binding assay
395	4640	374	Fish	Micropogonias undulatus (Atlantic croaker), male	20-beta-S receptor		*In vitro*	Lab				4	0.1-1 µM	Competitive binding assay
395	4641	474	Fish	Micropogonias undulatus (Atlantic croaker), male	20-beta-S receptor		*In vitro*	Lab				4	0.1-10 µM	Competitive binding assay
395	4642	230	Fish	Micropogonias undulatus (Atlantic croaker), male	Sperm		*In vitro*	Lab		2-3 min		4	0.2-1 mM	Dose range: 0.05-1 mM
126	2713	256	Fish	Mystus vittatus	Oocytes		*In vitro*	Lab		1 day		25	10-1000 ppb	
126	2714	405	Fish	Mystus vittatus	Oocytes		*In vitro*	Lab		1 day		25	0.01-1 ppb	
126	2715	407	Fish	Mystus vittatus	Oocytes		*In vitro*	Lab		1 day		25	1-100 ppb	
126	2716	406	Fish	Mystus vittatus	Oocytes		*In vitro*	Lab		1 day		25	0.001-0.1	
11	2478	221	Fish	Oncorhynchus mykiss (Rainbow trout)			*In vivo*	Lab	Semi-static		Water		LC100 = 0.5 mg/l	
195	3172	279	Fish	Oncorhynchus mykiss (Rainbow trout)	ER		*In vitro*	Lab					0.1-10 µM	
195	3173	285	Fish	Oncorhynchus mykiss (Rainbow trout)	ER		*In vitro*	Lab					0.1-10 µM	
195	3174	280	Fish	Oncorhynchus mykiss (Rainbow trout)	ER		*In vitro*	Lab					1-1000 µM	
195	3175	510	Fish	Oncorhynchus mykiss (Rainbow trout)	ER		*In vitro*	Lab					0.1-1000 µM	
195	3176	511	Fish	Oncorhynchus mykiss (Rainbow trout)	ER		*In vitro*	Lab					0.1-1 mM	
195	3177	512	Fish	Oncorhynchus mykiss (Rainbow trout)	ER		*In vitro*	Lab					0.1-1 mM	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
195	3178	341	Fish	Oncorhynchus mykiss (Rainbow trout)	ER		*In vitro*	Lab					0.5-1 mM	
195	3179	513	Fish	Oncorhynchus mykiss (Rainbow trout)	ER		*In vitro*	Lab					0.1-1 mM	
195	3180	274	Fish	Oncorhynchus mykiss (Rainbow trout)	ER		*In vitro*	Lab					0.01-1 mM	
200	3227	380	Fish	Oncorhynchus mykiss (Rainbow trout)		Juvenile	*In vivo*	Lab		9 d	Intraperitoneal		500 µg/kg	Single dose
200	3242	382	Fish	Oncorhynchus mykiss (Rainbow trout)		Juvenile	*In vivo*	Lab		9 d	Intraperitoneal		5 mg/kg	Single dose
200	3243	383	Fish	Oncorhynchus mykiss (Rainbow trout)		Juvenile	*In vivo*	Lab		9 d	Intraperitoneal		5 mg/kg	Single dose
200	3244	413	Fish	Oncorhynchus mykiss (Rainbow trout)		Juvenile	*In vivo*	Lab		9 d	Intraperitoneal		50 mg/kg	Single dose
200	3245	157	Fish	Oncorhynchus mykiss (Rainbow trout)		Juvenile	*In vivo*	Lab		9 d	Intraperitoneal		50 mg/kg	Single dose
200	3246	528	Fish	Oncorhynchus mykiss (Rainbow trout)		Juvenile	*In vivo*	Lab		9 d	Intraperitoneal		50 mg/kg	Single dose
200	3248	279	Fish	Oncorhynchus mykiss (Rainbow trout)		Juvenile	*In vivo*	Lab		9 d	Intraperitoneal		500 mg/kg	Single dose
227	3538	577	Fish	Oncorhynchus mykiss (Rainbow trout)	Interrenal cells	Juvenile	*In vitro*	Lab		1 h		15	EC50 = 168 µM	LC50/EC50 ratio: measure for endocrine toxicity
227	3539	578	Fish	Oncorhynchus mykiss (Rainbow trout)	Interrenal cells	Juvenile	*In vitro*	Lab		1 h		15	EC50 = 355 µM	LC50/EC50 ratio: measure for endocrine toxicity
227	3540	326	Fish	Oncorhynchus mykiss (Rainbow trout)	Interrenal cells	Juvenile	*In vitro*	Lab		1 h		15	EC50 = 116 µM	LC50/EC50 ratio: measure for endocrine toxicity
227	3541	128	Fish	Oncorhynchus mykiss (Rainbow trout)	Interrenal cells	Juvenile	*In vitro*	Lab		1 h		15	EC50 = 22.3 µM	LC50/EC50 ratio: measure for endocrine toxicity

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
227	3542	465	Fish	Oncorhynchus mykiss (Rainbow trout)	Interrenal cells	Juvenile	*In vitro*	Lab		1 h		15	EC50 = 130 µM	LC50/EC50 ratio: measure for endocrine toxicityLC50/EC50 ratio: measure for endocrine toxicity
243	3739	415	Fish	Oncorhynchus mykiss (Rainbow trout)		Embryo	*In vivo*	Lab		6 m	Microinjection	12-14	80-160 mg/kg	Single dose; concentration range: 40-160 mg/kg
243	3740	230	Fish	Oncorhynchus mykiss (Rainbow trout)		Embryo	*In vivo*	Lab		6 m	Microinjection	12-14	7.5-30 mg/kg	Single dose; concentration range: 40-160 mg/kg
243	3741	415	Fish	Oncorhynchus mykiss (Rainbow trout)		Embryo	*In vivo*	Lab		6 m	Microinjection	12-14	1-80 mg/kg	Single dose
243	3742	358	Fish	Oncorhynchus mykiss (Rainbow trout)		Embryo	*In vivo*	Lab		6 m	Microinjection	12-14	10-80 mg/kg	Single dose
243	3743	277	Fish	Oncorhynchus mykiss (Rainbow trout)		Embryo	*In vivo*	Lab		6 m	Microinjection	12-14	0.01-1 mg/kg	Single dose
243	3744	415	Fish	Oncorhynchus mykiss (Rainbow trout)		Embryo	*In vivo*	Lab		2.5 y	Microinjection	12-14	1-80 mg/kg	Single dose
243	3745	358	Fish	Oncorhynchus mykiss (Rainbow trout)		Embryo	*In vivo*	Lab		2.5 y	Microinjection	12-14	10-80 mg/kg	Single dose
243	3746	277	Fish	Oncorhynchus mykiss (Rainbow trout)		Embryo	*In vivo*	Lab		2.5 y	Microinjection	12-14	0.01-1 mg/kg	Single dose
286	4011	323	Fish	Oncorhynchus mykiss (Rainbow trout)		Adult	*In vivo*	Lab	Flow through	30 d	Water	10-12	10-25µg/l	Cd dosed as CdCl
286	4012	323	Fish	Oncorhynchus mykiss (Rainbow trout)		Juvenile	*In vivo*	Lab	Flow through	30 d	Water	10-12	1 µg/l	Dose range: 1-5 µg/l; Cd dosed as CdCl
291	4093	595	Fish	Oncorhynchus mykiss (Rainbow trout)	AR		*In vitro*	Lab					up to 50 µM	Competitive binding studies using cytosolic fractions from brain and gonads
291	4094	571	Fish	Oncorhynchus mykiss (Rainbow trout)	AR		*In vitro*	Lab					up to 50 µM	Competitive binding studies using cytosolic fractions from brain and gonads

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
291	4095	245	Fish	Oncorhynchus mykiss (Rainbow trout)	AR		*In vitro*	Lab					up to 50 µM	Competitive binding studies using cytosolic fractions from brain and gonads
291	4096	400	Fish	Oncorhynchus mykiss (Rainbow trout)	AR		*In vitro*	Lab					up to 50 µM	Competitive binding studies using cytosolic fractions from brain and gonads
291	4097	401	Fish	Oncorhynchus mykiss (Rainbow trout)	AR		*In vitro*	Lab					up to 50 µM	Competitive binding studies using cytosolic fractions from brain and gonads
291	4098	355	Fish	Oncorhynchus mykiss (Rainbow trout)	AR		*In vitro*	Lab					up to 25 µM	Competitive binding studies using cytosolic fractions from brain and gonads
291	4099	354	Fish	Oncorhynchus mykiss (Rainbow trout)	AR		*In vitro*	Lab					up to 25 µM	Competitive binding studies using cytosolic fractions from brain and gonads
291	4100	242	Fish	Oncorhynchus mykiss (Rainbow trout)	AR		*In vitro*	Lab					up to 25 µM	Competitive binding studies using cytosolic fractions from brain and gonads
291	4101	415	Fish	Oncorhynchus mykiss (Rainbow trout)	AR		*In vitro*	Lab					up to 25 µM	Competitive binding studies using cytosolic fractions from brain and gonads
291	4102	358	Fish	Oncorhynchus mykiss (Rainbow trout)	AR		*In vitro*	Lab					up to 25 µM	Competitive binding studies using cytosolic fractions from brain and gonads
293	4107	375	Fish	Oncorhynchus mykiss (Rainbow trout)		Immature	*In vivo*	Lab	Semi-static	21 d	Water	13	75-150 µg/l	
293	4108	375	Fish	Oncorhynchus mykiss (Rainbow trout)		Immature	*In vivo*	Lab	Semi-static	21 d	Water	13	9-60 µg/l	Concentrations in pulp and paper mill effluents
293	4109	375	Fish	Oncorhynchus mykiss (Rainbow trout)		Immature	*In vivo*	Lab	Semi-static	21 d	Water	13	8-55 µg/l	Concentrations in pulp and paper mill effluents
306	4179	241	Fish	Oncorhynchus mykiss (Rainbow trout)	Head kidney	Juvenile	*In vitro*	Lab		5 h			100 mg/l	Dose range: 25-100 mg/l
306	4180	359	Fish	Oncorhynchus mykiss (Rainbow trout)	Head kidney	Juvenile	*In vitro*	Lab		5 h			25-100 mg/l	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
331	4349	382	Fish	Oncorhynchus mykiss (Rainbow trout)		Juvenile	*In vivo*	Field		2 w	Environmental contamination	Mean water temp: 11.3	1.5 ng/l	Cage experiments at site receiving STW effluents (mainly domestic wastewater)
333	4351	642	Fish	Oncorhynchus mykiss (Rainbow trout)	Liver	Sexually immature	*In vitro*	Lab		72 h		15	6 nM - 12.5 µM	
333	4352	727	Fish	Oncorhynchus mykiss (Rainbow trout)	Liver	Sexually immature	*In vitro*	Lab		72 h		15	6 nM - 6.25 µM	
333	4353	346	Fish	Oncorhynchus mykiss (Rainbow trout)	Liver	Sexually immature	*In vitro*	Lab		72 h		15	6 nM - 6.25 µM	
334	4354	376	Fish	Oncorhynchus mykiss (Rainbow trout)	Hepatic ER	Sexually immature	*In vitro*	Lab					0.1-8 µM	ER binding assay
334	4355	375	Fish	Oncorhynchus mykiss (Rainbow trout)	Hepatic ER	Sexually immature	*In vitro*	Lab					1-8 µM	ER binding assay
334	4356	65	Fish	Oncorhynchus mykiss (Rainbow trout)	Hepatic ER	Sexually immature	*In vitro*	Lab					1-20 µM	ER binding assay
334	4357	728	Fish	Oncorhynchus mykiss (Rainbow trout)	Hepatic ER	Sexually immature	*In vitro*	Lab					1-20 µM	ER binding assay
334	4358	729	Fish	Oncorhynchus mykiss (Rainbow trout)	Hepatic ER	Sexually immature	*In vitro*	Lab					2-8 µM	ER binding assay
334	4359	375	Fish	Oncorhynchus mykiss (Rainbow trout)	Liver	Sexually immature	*In vitro*	Lab		4 d		18	0.1-10 µM	
334	4360	65	Fish	Oncorhynchus mykiss (Rainbow trout)	Liver	Sexually immature	*In vitro*	Lab		4 d		18	0.1-10 µM	
334	4361	65	Fish	Oncorhynchus mykiss (Rainbow trout)		Sexually immature	*In vivo*	Lab		21 d	Water	13	50-100 µg/l	Dose range: 25-100 µg/l
334	4362	375	Fish	Oncorhynchus mykiss (Rainbow trout)		Sexually immature	*In vivo*	Lab		21 d	Water	13	10-150 µg/l	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
340	4373	323	Fish	Oncorhynchus mykiss (Rainbow trout)		Immature	*In vivo*	Lab	Flow through	up to 30 d	Water	10-12	1 µg/l	
343	4376	300	Fish	Oncorhynchus mykiss (Rainbow trout)			*In vivo*	Lab	Flow through	6 w	Intraperitoneal	11	5 mg/kg	Single dose
344	4377	157	Fish	Oncorhynchus mykiss (Rainbow trout)		Juvenile	*In vivo*	Lab	Flow through	12 d	Water	15	70.2-556 µg/l	Dose range: 10-500 µg/l
351	4384	135	Fish	Oncorhynchus mykiss (Rainbow trout)	Liver		*In vitro*	Lab		4 h		4	165 µM	
351	4385	276	Fish	Oncorhynchus mykiss (Rainbow trout)	Liver		*In vitro*	Lab		4 h		4	165 µM	
351	4386	730	Fish	Oncorhynchus mykiss (Rainbow trout)	Liver		*In vitro*	Lab		4 h		4	165 µM	
351	4387	733	Fish	Oncorhynchus mykiss (Rainbow trout)	Liver		*In vitro*	Lab		4 h		4	165 µM	
351	4388	732	Fish	Oncorhynchus mykiss (Rainbow trout)	Liver		*In vitro*	Lab		4 h		4	165 µM	
351	4389	529	Fish	Oncorhynchus mykiss (Rainbow trout)	Liver		*In vitro*	Lab		4 h		4	165 µM	
351	4390	65	Fish	Oncorhynchus mykiss (Rainbow trout)	Liver		*In vitro*	Lab		4 h		4	165 µM	
351	4391	731	Fish	Oncorhynchus mykiss (Rainbow trout)	Liver		*In vitro*	Lab		4 h		4	165 µM	
351	4392	280	Fish	Oncorhynchus mykiss (Rainbow trout)	Liver		*In vitro*	Lab		4 h		4	165 µM	
351	4393	735	Fish	Oncorhynchus mykiss (Rainbow trout)	Liver		*In vitro*	Lab		4 h		4	165 µM	
351	4394	734	Fish	Oncorhynchus mykiss (Rainbow trout)	Liver		*In vitro*	Lab		4 h		4	165 µM	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
351	4395	279	Fish	Oncorhynchus mykiss (Rainbow trout)	Liver		*In vitro*	Lab		4 h		4	165 µM	
351	4396	285	Fish	Oncorhynchus mykiss (Rainbow trout)	Liver		*In vitro*	Lab		4 h		4	165 µM	
351	4397	282	Fish	Oncorhynchus mykiss (Rainbow trout)	Liver		*In vitro*	Lab		4 h		4	165 µM	
351	4398	236	Fish	Oncorhynchus mykiss (Rainbow trout)	Liver		*In vitro*	Lab		4 h		4	165 µM	
351	4399	225	Fish	Oncorhynchus mykiss (Rainbow trout)	Liver		*In vitro*	Lab		4 h		4	165 µM	
351	4400	376	Fish	Oncorhynchus mykiss (Rainbow trout)	Liver		*In vitro*	Lab		4 h		4	165 µM	
351	4401	374	Fish	Oncorhynchus mykiss (Rainbow trout)	Liver		*In vitro*	Lab		4 h		4	165 µM	
351	4402	135	Fish	Oncorhynchus mykiss (Rainbow trout)	Brain		*In vitro*	Lab		4 h		4	165 µM	
351	4403	276	Fish	Oncorhynchus mykiss (Rainbow trout)	Brain		*In vitro*	Lab		4 h		4	165 µM	
351	4404	730	Fish	Oncorhynchus mykiss (Rainbow trout)	Brain		*In vitro*	Lab		4 h		4	165 µM	
351	4405	733	Fish	Oncorhynchus mykiss (Rainbow trout)	Brain		*In vitro*	Lab		4 h		4	165 µM	
351	4406	732	Fish	Oncorhynchus mykiss (Rainbow trout)	Brain		*In vitro*	Lab		4 h		4	165 µM	
351	4407	529	Fish	Oncorhynchus mykiss (Rainbow trout)	Brain		*In vitro*	Lab		4 h		4	165 µM	
351	4408	65	Fish	Oncorhynchus mykiss (Rainbow trout)	Brain		*In vitro*	Lab		4 h		4	165 µM	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
351	4409	731	Fish	Oncorhynchus mykiss (Rainbow trout)	Brain		*In vitro*	Lab		4 h		4	165 µM	
351	4410	280	Fish	Oncorhynchus mykiss (Rainbow trout)	Brain		*In vitro*	Lab		4 h		4	165 µM	
351	4411	735	Fish	Oncorhynchus mykiss (Rainbow trout)	Brain		*In vitro*	Lab		4 h		4	165 µM	
351	4412	734	Fish	Oncorhynchus mykiss (Rainbow trout)	Brain		*In vitro*	Lab		4 h		4	165 µM	
351	4413	279	Fish	Oncorhynchus mykiss (Rainbow trout)	Brain		*In vitro*	Lab		4 h		4	165 µM	
351	4414	285	Fish	Oncorhynchus mykiss (Rainbow trout)	Brain		*In vitro*	Lab		4 h		4	165 µM	
351	4415	282	Fish	Oncorhynchus mykiss (Rainbow trout)	Brain		*In vitro*	Lab		4 h		4	165 µM	
351	4416	236	Fish	Oncorhynchus mykiss (Rainbow trout)	Brain		*In vitro*	Lab		4 h		4	165 µM	
351	4417	225	Fish	Oncorhynchus mykiss (Rainbow trout)	Brain		*In vitro*	Lab		4 h		4	165 µM	
351	4418	376	Fish	Oncorhynchus mykiss (Rainbow trout)	Brain		*In vitro*	Lab		4 h		4	165 µM	
351	4419	374	Fish	Oncorhynchus mykiss (Rainbow trout)	Brain		*In vitro*	Lab		4 h		4	165 µM	
362	4464	277	Fish	Oncorhynchus mykiss (Rainbow trout)		Juvenile	*In vivo*	Lab	Flow through	12 d	Intraperitoneal		50 mg/kg	
362	4465	277	Fish	Oncorhynchus mykiss (Rainbow trout)		Juvenile	*In vivo*	Lab	Flow through	9 d	Water		150 µg/l	
362	4466	278	Fish	Oncorhynchus mykiss (Rainbow trout)		Juvenile	*In vivo*	Lab	Flow through	12 d	Intraperitoneal		50 mg/kg	Technical grade

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
362	4467	278	Fish	Oncorhynchus mykiss (Rainbow trout)		Juvenile	*In vivo*	Lab	Flow through	9 d	Water		150 µg/l	Technical grade
362	4468	529	Fish	Oncorhynchus mykiss (Rainbow trout)		Juvenile	*In vivo*	Lab	Flow through	12 d	Intraperitoneal		50 mg/kg	
362	4469	529	Fish	Oncorhynchus mykiss (Rainbow trout)		Juvenile	*In vivo*	Lab	Flow through	9 d	Water		150 µg/l	
362	4470	65	Fish	Oncorhynchus mykiss (Rainbow trout)		Juvenile	*In vivo*	Lab	Flow through	12 d	Intraperitoneal		50 mg/kg	
362	4471	65	Fish	Oncorhynchus mykiss (Rainbow trout)		Juvenile	*In vivo*	Lab	Flow through	9 d	Water		150 µg/l	
367	4503	374	Fish	Oncorhynchus mykiss (Rainbow trout)	Hepatic ER	Adult	*In vitro*	Lab		4 h		40	0.05-5 nM	Competitive binding assay
367	4504	754	Fish	Oncorhynchus mykiss (Rainbow trout)	Hepatic ER	Adult	*In vitro*	Lab		4 h		40	0.05-5 nM	Competitive binding assay
367	4505	755	Fish	Oncorhynchus mykiss (Rainbow trout)	Hepatic ER	Adult	*In vitro*	Lab		4 h		40	0.05-5 nM	Competitive binding assay
391	4625	380	Fish	Oncorhynchus mykiss (Rainbow trout)		Juvenile	*In vivo*	Lab		9 d	Intraperitoneal		0.5 mg/kg	Single dose at day 0
391	4626	383	Fish	Oncorhynchus mykiss (Rainbow trout)		Juvenile	*In vivo*	Lab		9 d	Intraperitoneal		5 mg/kg	Single dose at day 0
391	4627	382	Fish	Oncorhynchus mykiss (Rainbow trout)		Juvenile	*In vivo*	Lab		9 d	Intraperitoneal		5 mg/kg	Single dose at day 0
391	4628	278	Fish	Oncorhynchus mykiss (Rainbow trout)		Juvenile	*In vivo*	Lab		9 d	Intraperitoneal		50 mg/kg	Single dose at day 0; technical mixture
391	4629	157	Fish	Oncorhynchus mykiss (Rainbow trout)		Juvenile	*In vivo*	Lab		9 d	Intraperitoneal		50 mg/kg	Single dose at day 0
391	4630	279	Fish	Oncorhynchus mykiss (Rainbow trout)		Juvenile	*In vivo*	Lab		9 d	Intraperitoneal		500 mg/kg	Single dose at day 0

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
391	4631	285	Fish	Oncorhynchus mykiss (Rainbow trout)		Juvenile	*In vivo*	Lab		9 d	Intraperitoneal		500 mg/kg	Single dose at day 0
402	4659	464	Fish	Oncorhynchus mykiss (Rainbow trout)		Juvenile	*In vivo*	Lab	Semi-static	96 h	Water	13	1-10% effluent	Exposure to primary treated effluent from chemi-thermomechanical, thermomechanical and bleached kraft mills
407	4672	380	Fish	Oncorhynchus mykiss (Rainbow trout)	Hepatocytes		*In vitro*	Lab		48 h			1-1000 nM	Dose range: 0.1-1000 nM
407	4682	250	Fish	Oncorhynchus mykiss (Rainbow trout)	Hepatocytes		*In vitro*	Lab		48 h			100 µM	
407	4683	775	Fish	Oncorhynchus mykiss (Rainbow trout)	Hepatocytes		*In vitro*	Lab		48 h			100 µM	
407	4684	508	Fish	Oncorhynchus mykiss (Rainbow trout)	Hepatocytes		*In vitro*	Lab		48 h			100 µM	
407	4685	774	Fish	Oncorhynchus mykiss (Rainbow trout)	Hepatocytes		*In vitro*	Lab		48 h			100 µM	
407	4686	287	Fish	Oncorhynchus mykiss (Rainbow trout)	Hepatocytes		*In vitro*	Lab		48 h			100 µM	
407	4687	373	Fish	Oncorhynchus mykiss (Rainbow trout)	Hepatocytes		*In vitro*	Lab		48 h			100 µM	
407	4688	65	Fish	Oncorhynchus mykiss (Rainbow trout)	Hepatocytes		*In vitro*	Lab		48 h			10 µM	
407	4689	426	Fish	Oncorhynchus mykiss (Rainbow trout)	Hepatocytes		*In vitro*	Lab		48 h			100 µM	
407	4690	773	Fish	Oncorhynchus mykiss (Rainbow trout)	Hepatocytes		*In vitro*	Lab		48 h			100 µM	
116	2689	250	Fish	Oncorhynchus mykiss (Rainbow trout), male	Liver		*In vitro*	Lab		24 h	Culture medium		LOEL = 100 µM	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
116	2690	230	Fish	Oncorhynchus mykiss (Rainbow trout), male	Liver		*In vitro*	Lab		24 h			LOEL = 10 µM	
116	2693	252	Fish	Oncorhynchus mykiss (Rainbow trout), male	Liver		*In vitro*	Lab		24 h			NOEC = 100 µM	
156	2794	277	Fish	Oncorhynchus mykiss (Rainbow trout), male	Hepatocytes		*In vitro*	Lab					0.1-10 µM	
156	2795	65	Fish	Oncorhynchus mykiss (Rainbow trout), male	Hepatocytes		*In vitro*	Lab					LOEL = 1 µM	Concentration range: 0.1-10 µM
156	2796	373	Fish	Oncorhynchus mykiss (Rainbow trout), male	Hepatocytes		*In vitro*	Lab					LOEL = 1 µM	Concentration range: 0.1-10 µM
156	2797	372	Fish	Oncorhynchus mykiss (Rainbow trout), male	Hepatocytes		*In vitro*	Lab					LOEL = 1 µM	Concentration range: 0.1-10 µM
157	2810	276	Fish	Oncorhynchus mykiss (Rainbow trout), male	Hepatocytes	Immature	*In vitro*	Lab		4 d			10 µM	
157	2811	277	Fish	Oncorhynchus mykiss (Rainbow trout), male	Hepatocytes	Immature	*In vitro*	Lab		4 d			10 µM	
157	2812	373	Fish	Oncorhynchus mykiss (Rainbow trout), male	Hepatocytes	Immature	*In vitro*	Lab		4 d			10 µM	
157	2813	372	Fish	Oncorhynchus mykiss (Rainbow trout), male	Hepatocytes	Immature	*In vitro*	Lab		4 d			10 µM	
157	2814	65	Fish	Oncorhynchus mykiss (Rainbow trout), male	Hepatocytes	Immature	*In vitro*	Lab		4 d			10 µM	
157	2815	371	Fish	Oncorhynchus mykiss (Rainbow trout), male	Hepatocytes	Immature	*In vitro*	Lab		4 d			10 µM	
157	2816	412	Fish	Oncorhynchus mykiss (Rainbow trout), male	Hepatocytes	Immature	*In vitro*	Lab		4 d			10 µM	
157	2817	410	Fish	Oncorhynchus mykiss (Rainbow trout), male	Hepatocytes	Immature	*In vitro*	Lab		4 d			10 µM	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
157	2818	411	Fish	Oncorhynchus mykiss (Rainbow trout), male	Hepatocytes	Immature	*In vitro*	Lab		4 d			10 µM	
243	3747	415	Fish	Oncorhynchus tshwytscha (Chinook salmon)		Embryo	*In vivo*	Lab		6 m	Microinjection	12-14	1-80 mg/kg	Single dose
338	4368	65	Fish	Oryzias latipes (Japanese medaka)		Larva (5-8 d)	*In vivo*	Lab	Flow through	1 month	Water	25	0.5-1.9 µg/l	
338	4369	355	Fish	Oryzias latipes (Japanese medaka)		Larva (5-8 d)	*In vivo*	Lab	Flow through	1 month	Water	25	0.2-2.3 µg/l	
338	4370	380	Fish	Oryzias latipes (Japanese medaka)		Larva (5-8 d)	*In vivo*	Lab	Flow through	1 month	Water	25	0.01-1.66 µg/l	
296	4129	157	Fish	Oryzias Latipes (Japanese medaka)		Fertilized egg	*In vivo*	Lab	Semi-static	Until 60 d posthatch	Water	24	1820 µg/l	Dose range: 2.28-1820 µg/l
297	4130	242	Fish	Oryzias Latipes (Japanese medaka)		Fertilized egg	*In vivo*	Lab	Semi-static	100 d	Water	20-22	1-50 µg/l	
299	4142	277	Fish	Oryzias Latipes (Japanese medaka)		1 day	*In vivo*	Lab	Semi-static	6 m	Water	20	10-100 µg/l	After 6 month exposure: monitoring of reproductive succes and transgenerational effects
300	4143	328	Fish	Oryzias Latipes (Japanese medaka)		Mature	*In vivo*	Lab	Semi-static	3 w	Food	25	1 µg/kg/d	
300	4144	296	Fish	Oryzias Latipes (Japanese medaka)		Mature	*In vivo*	Lab	Semi-static	3 w	Food	25	1 µg/kg/d	
380	4461	157	Fish	Oryzias latipes (Japanese Medaka), male		Adult (10-15 m)	*In vivo*	Lab	Semi-static	2 w	Water	24	10 µM	Dose range: 0.3-10 µM; after exposure males were kept together with 2 unexposed females for spawning
380	4601	380	Fish	Oryzias latipes (Japanese Medaka), male		Adult (10-15 m)	*In vivo*	Lab	Semi-static	2 w	Water	24	3-100 nM	Dose range: 1-100 nM; after exposure males were kept together with 2 unexposed females for spawning

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
380	4602	278	Fish	Oryzias latipes (Japanese Medaka), male		Adult (10-15 m)	*In vivo*	Lab	Semi-static	2 w	Water	24	0.3 µM	Dose range: 0.03-0.3 µM; after exposure males were kept together with 2 unexposed females for spawning
380	4603	280	Fish	Oryzias latipes (Japanese Medaka), male		Adult (10-15 m)	*In vivo*	Lab	Semi-static	2 w	Water	24	0.1-1 µM	After exposure males were kept together with 2 unexposed females for spawning
341	4374	277	Fish	Oryzias latipes (Japanese medaka)		Egg	*In vivo*	Lab	Static	17 d	Water	25	0.1-1 mg/l	
350	4383	382	Fish	Oryzias latipes (Japanese medaka), d-rR strain		Embryo	*In vivo*	Lab		Until maturity	Nano-injection	25-27	0.005-5 ng/egg	Single injection
177	3022	242	Fish	Oryzias latipes (Japanese Medaka), d-rR strain		egg	*In vivo*	Lab		10 w	Egg micro injection	25	227 ng/egg	Concentration range: 20-1079 ng/egg
177	3023	380	Fish	Oryzias latipes (Japanese Medaka), d-rR strain		egg	*In vivo*	Lab		10 w	Egg micro injection	25	2 ng/egg	
297	4131	242	Fish	Oryzias Latipes (Japanese medaka), female		Adult	*In vivo*	Lab	Semi-static	2 w	Water	20-22	2.5 µg/l	
110	2682	357	Fish	Oryzias latipes (Medaka)			*In vivo*	Lab	Semi-static		Water		32 µg/l	
50	2544	230	Fish	Oryzias latipes (Teleost)			*In vivo*	Lab		4-9 d	Water		0.001-0.002 mg/l	
397	4644	464	Fish	Perca fluviatilis L. (Perch)			*In vivo*	Field		Environmental contamination				Fish collected at sites receiving pulp and paper mill effluents
339	4371	380	Fish	Pimephales promelas (Fathead minnow)		Approaching sexual maturity	*In vivo*	Lab	Flow through	21 d	Water	22	0.1-1 µg/l	Dose range: 0.01-1 µg/l
339	4372	378	Fish	Pimephales promelas (Fathead minnow)		Approaching sexual maturity	*In vivo*	Lab	Flow through	21 d	Water	22	31.8-993 ng/l	Dose range: 9.9-993 ng/l

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
346	4379	380	Fish	Pimephales promelas (Fathead minnow)		Sexually mature (6-8 m)	*In vivo*	Lab	Semi-static	14 d	Water	25-26	0.0625-1000 nM	
347	4380	464	Fish	Platichthys flesus (Flounder)		Juvenile	*In vivo*	Lab	Flow through	up to 3 y	Dredged spoil			Mesocosm study using various concentrations of polluted harbour dredged spoil containing PAH and PCBs
382	4605	393	Fish	Platichthys flesus (Flounder)		2 y	*In vivo*	Lab	Flow through	2 and 10 d	Intraperitoneal	13	20-500 mg/kg body weight	Fish collected in the field; single dose at day 0
385	4611	464	Fish	Platichthys flesus (Flounder)		Adult	*In vivo*	Field		Environmental contamination				Fish collected at sites receiving effluents from sewage treatment works
387	4613	464	Fish	Platichthys flesus (Flounder)			*In vivo*	Field		Environmental contamination				Fish collected at sites contaminated with PAH and PCBs
423	4828	133	Fish	Platichthys flesus (Flounder)			*In vivo*	Field			Environmental contamination		Fish collected in United Kingdom estuaries, the North Sea and the Irish Sea; total PAK in liver: 48-365 µg/kg wet weight (predominantly naphtalene and its alkyl derivatives); organochlorines in liver: PCBs (predominantly), dieldrin, alpha and gamma hexachlorocyclohexane, DDT and metabolites	
423	4829	289	Fish	Platichthys flesus (Flounder)			*In vivo*	Field			Environmental contamination		Fish collected in United Kingdom estuaries, the North Sea and the Irish Sea; total PAK in liver: 48-365 µg/kg wet weight (predominantly naphtalene and its alkyl derivatives); organochlorines in liver: PCBs (predominantly), dieldrin, alpha and gamma hexachlorocyclohexane, DDT and metabolites	
423	4830	464	Fish	Platichthys flesus (Flounder)			*In vivo*	Field			Environmental contamination		Fish collected in United Kingdom estuaries, the North Sea and the Irish Sea; total PAK in liver: 48-365 µg/kg wet weight (predominantly naphtalene and its alkyl derivatives); organochlorines in liver: PCBs (predominantly), dieldrin, alpha and gamma hexachlorocyclohexane, DDT and metabolites	
342	4375	65	Fish	Platichthys flesus (Flounder), male			*In vivo*	Lab	Flow through	2 w	Intraperitoneal	13	10-200 µg/g/w	Fish collected in the field and acclimatised for 5 days; injections given in half doses one a week

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
352	4420	464	Fish	Platichthys flesus (Flounder), male			*In vivo*	Field						Fish collected in estuaries in the period from spring to winter 1997
423	4826	382	Fish	Platichthys flesus (Flounder), male		Adult and nearly-adult juveniles	*In vivo*	Lab	Flow through	3 w	Water	10	10 ng/l	Dose range: 1 and 10 ng/l; fish collected in the field
423	4827	65	Fish	Platichthys flesus (Flounder), male		Adult and nearly-adult juveniles	*In vivo*	Lab	Flow through	3 w	Water	10	100 µg/l	Dose range: 10, 30 and 100 ng/l; fish collected in the field
393	4636	464	Fish	Pleuronectes yokohamae (Flounder), male		1-6 y	*In vivo*	Field		Environmental contamination				Fish collected in the field
110	2681	357	Fish	Poecilia reticulata (Guppy)			*In vivo*	Lab	Semi-static		Water		32 µg/l	
133	2728	258	Fish	Poecilia reticulata (Guppy), male	Testis	Mature	*In vivo*	Lab	Semi-static	40 d	Water		0.01-1 ppm	Recovery after 2 months
278	3982	277	Fish	Poecilia reticulata (Guppy), male		Adult	*In vivo*	Lab	Flow through	4 w	Water	25	150 µg/l	
278	3983	380	Fish	Poecilia reticulata (Guppy), male		Adult	*In vivo*	Lab	Flow through	4 w	Water	25	10 µg/l	
303	4147	313	Fish	Poeciliopsis lucida	Liver		*In vitro*	Lab		72 h		30	0.001-10 nM	
303	4148	470	Fish	Poeciliopsis lucida	Liver		*In vitro*	Lab		72 h		30	0.001-100 nM	
303	4149	300	Fish	Poeciliopsis lucida	Liver		*In vitro*	Lab		72 h		30	1 pM-100 µM	
381	4604	464	Fish	Pomatoschistus minutus (Sand goby)		Adult	*In vivo*	Lab	Flow through	19 w prior to spawning	Sewage sludge	Natural fluctuations	0.1%	Fish collected in the field
15	2483	222	Fish	Puntius conchonius (Teleost)			*In vivo*	Lab		60-120 d	Water		50 µg/l	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
298	4135	157	Fish	Rainbow trout		Immature	*In vivo*	Lab	Flow through	18 d	Intraperitoneal	11-14	50 mg/kg	Dosing on days 0, 6 and 12
298	4136	528	Fish	Rainbow trout		Immature	*In vivo*	Lab	Flow through	18 d	Intraperitoneal	11-14	50 mg/kg	Dosing on days 0, 6 and 12
298	4137	656	Fish	Rainbow trout		Immature	*In vivo*	Lab	Flow through	18 d	Intraperitoneal	11-14	50 mg/kg	Dosing on days 0, 6 and 12
298	4138	279	Fish	Rainbow trout		Immature	*In vivo*	Lab	Flow through	18 d	Intraperitoneal	11-14	500-1000 mg/kg	Dosing on days 0, 6 and 12
298	4139	285	Fish	Rainbow trout		Immature	*In vivo*	Lab	Flow through	18 d	Intraperitoneal	11-14	500-1000 mg/kg	Dosing on days 0, 6 and 12
298	4140	242	Fish	Rainbow trout		Immature	*In vivo*	Lab	Flow through	18 d	Intraperitoneal	11-14	25-100 mg/kg	Dosing on days 0, 6 and 12
298	4141	355	Fish	Rainbow trout		Immature	*In vivo*	Lab	Flow through	18 d	Intraperitoneal	11-14	125-200 mg/kg	Dosing on days 0, 6 and 12
384	4609	425	Fish	Rainbow trout		Juvenile (18 m)	*In vivo*	Lab	Flow through	1 week	Intraperitoneal	10	5-50 mg/kg body weight	
384	4610	279	Fish	Rainbow trout		Juvenile (18 m)	*In vivo*	Lab	Flow through	1 week	Intraperitoneal	10	5-50 mg/kg body weight	
32	2516	226	Fish	Rasbora daniconius (Carp minnow)			*In vivo*	Lab	Semi-static	5-75 d	Water		0.001 mg/l	
397	4645	464	Fish	Rutilis rutilis L. (Roach)			*In vivo*	Field		Environmental contamination				Fish collected at sites receiving pulp and paper mill effluents
64	2571	231	Fish	Salmo gairdneri (Rainbow trout)			*In vivo*	Lab		6 m	Food		3-300 mg/kg food	
367	4506	374	Fish	Salmo salar (Atlantic salmon)		Juvenile	*In vivo*	Lab	Flow through	7 d	Intraperitoneal	10	1-10 mg/kg	Single dose on day 0
367	4507	754	Fish	Salmo salar (Atlantic salmon)		Juvenile	*In vivo*	Lab	Flow through	7 d	Intraperitoneal	10	1-10 mg/kg	Single dose on day 0

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
367	4508	755	Fish	Salmo salar (Atlantic salmon)		Juvenile	*In vivo*	Lab	Flow through	7 d	Intraperitoneal	10	1-10 mg/kg	Single dose on day 0
368	4509	65	Fish	Salmo salar (Atlantic salmon)		Juvenile	*In vivo*	Lab	Flow through	7 d	Intraperitoneal	10	25-125 mg/kg	Single dose on day 0; dose range: 5-125 mg/kg
119	2699	253	Fish	Salmo salar (Atlantic salmon), male		Mature	*In vivo*	Lab	Flow through	120 h	Water	13	0.3-45 µg/l	Mature males primed with ovulated female salmon urine: elevated plasma levels of sexsteroids
394	4637	65	Fish	Salmo salar (Atlantic salmon)		Juvenile	*In vivo*	Field		2 w	Intraperitoneal	10	25 mg/kg	Single dose
360	4459	277	Fish	Salmo trutta (Brown trout), male		Juvenile	*In vivo*	Lab	Flow through	10 d	Intraperitoneal	8-10	32-100 mg/kg	Dose range: 3.16-100 mg/kg
360	4460	746	Fish	Salmo trutta (Brown trout), male		Juvenile	*In vivo*	Lab	Flow through	10 d	Intraperitoneal	8-10	31.6-10,000 µg/kg	
336	4365	470	Fish	Salvelinus namaycush (Lake trout)		Juvenile	*In vivo*	Lab	Semi-static	12 w	Oral	11.5 - 13.1	3-30 µg/kg body weight	Single dose
33	2517	226	Fish	Sarotherodon mossambicus (Cichlid)			*In vivo*	Lab		28-63 d	Water		0.2-1 µg/l	Technical endosulfan (Thiodan)
14	2482	222	Fish	Teleost fish			*In vivo*	Lab			Water		50 µg/l	
14	2511	225	Fish	Teleost fish			*In vivo*	Lab			Water		50 µg/l	
123	2702	255	Fish	Tilapia leucostica			*In vivo*	Lab	Semi-static	14 d	Water		7 mg/l	
345	4378	611	Fish	Trematomus bernacchii			*In vivo*	Field			Environmental contamination		24.17 µg/g	Concentrations of phenanthrene-like PAH metabolites in bile
250	3774	380	Fish	Zoarces viviparus		Adult	*In vivo*	Lab		2 w	Intraperitoneal	11	10 mg/kg bodyweight	Dosing once a week; Fish collected in the field, 6 day acclimation period
250	3776	65	Fish	Zoarces viviparus		Embryo	*In vitro*	Lab	Semi-static	3 w	Water	11	1000 µg/l	Embryos dissected out of control females

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
250	3775	65	Fish	Zoarces viviparus, female		Adult	*In vivo*	Lab	Semi-static	3 w	Water	11	100-1000 µg/l	Fish collected in the field, 6 day acclimation period; concentration range: 10-1000 µg/l
127	2718	257	Insect	Oligonychus pratensis (Banks) (Banks grass mite)		Adult	*In vivo*	Lab		14 d	Sprayed on leaves		EC = 0.41 mg/ml	
357	4442	736	Insect	Oncopeltus fasciatus		3rd and 5th instar nymph	*In vivo*	Lab		96 h	Contact method of Bowers et al.	27		Bowers et al. 1976. Science, 193: 542-547
357	4443	737	Insect	Oncopeltus fasciatus		3rd and 5th instar nymph	*In vivo*	Lab		96 h	Contact method of Bowers et al.	27		Bowers et al. 1976. Science, 193: 542-547
357	4444	738	Insect	Oncopeltus fasciatus		3rd and 5th instar nymph	*In vivo*	Lab		96 h	Contact method of Bowers et al.	27		Bowers et al. 1976. Science, 193: 542-547
357	4445	739	Insect	Oncopeltus fasciatus		3rd and 5th instar nymph	*In vivo*	Lab		96 h	Contact method of Bowers et al.	27		Bowers et al. 1976. Science, 193: 542-547
357	4446	740	Insect	Oncopeltus fasciatus		3rd and 5th instar nymph	*In vivo*	Lab		96 h	Contact method of Bowers et al.	27		Bowers et al. 1976. Science, 193: 542-547

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
357	4447	741	Insect	Oncopeltus fasciatus		3rd and 5th instar nymph	*In vivo*	Lab		96 h	Contact method of Bowers et al.	27		Bowers et al. 1976. Science, 193: 542-547
357	4448	742	Insect	Oncopeltus fasciatus		3rd and 5th instar nymph	*In vivo*	Lab		96 h	Contact method of Bowers et al.	27		Bowers et al. 1976. Science, 193: 542-547
357	4449	743	Insect	Oncopeltus fasciatus		3rd and 5th instar nymph	*In vivo*	Lab		96 h	Contact method of Bowers et al.	27		Bowers et al. 1976. Science, 193: 542-547
357	4450	744	Insect	Oncopeltus fasciatus		3rd and 5th instar nymph	*In vivo*	Lab		96 h	Contact method of Bowers et al.	27		Bowers et al. 1976. Science, 193: 542-547
357	4451	745	Insect	Oncopeltus fasciatus		3rd and 5th instar nymph	*In vivo*	Lab		96 h	Contact method of Bowers et al.	27		Bowers et al. 1976. Science, 193: 542-547
127	2717	257	Insect	Tetranychus urticae Koch (Twospotted spider mite)		Adult	*In vivo*	Lab		14 d	Sprayed on leaves		EC = 25.5 mg/ml	
156	2806	277	Mammalian		Human ER and mouse ER		*In vitro*	Lab		48 h			0.1-10 µM	
156	2807	65	Mammalian		Human ER and mouse ER		*In vitro*	Lab		48 h			1-10 µM	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
156	2808	372	Mammalian		Human ER and mouse ER		*In vitro*	Lab		48 h			1-10 µM	
156	2809	373	Mammalian		Human ER and mouse ER		*In vitro*	Lab		48 h			1-10 µM	
240	3725	602	Mammalian		ERalpha		*In vitro*	Lab		36 h			1-10 µM	COS-7 cells transfected with ERalpha expression plasmid; concentration range: 10 pM - 10 µM
240	3726	65	Mammalian		ERalpha		*In vitro*	Lab		36 h			1-10 µM	COS-7 cells transfected with ERalpha expression plasmid; concentration range: 10 pM - 10 µM
240	3727	157	Mammalian		ERalpha		*In vitro*	Lab		36 h			1 µM	COS-7 cells transfected with ERalpha expression plasmid
417	4772	352	Mammalian		H4IIE liver cancer cells		*In vitro*	Lab		24 h			EC50 = 60 nM	CALUX assay
417	4773	350	Mammalian		H4IIE liver cancer cells		*In vitro*	Lab		24 h			0.4 µM	CALUX assay
417	4774	351	Mammalian		H4IIE liver cancer cells		*In vitro*	Lab		24 h			0.89 µM	CALUX assay
417	4775	347	Mammalian		H4IIE liver cancer cells		*In vitro*	Lab		24 h			3.06 µM	CALUX assay
417	4776	781	Mammalian		H4IIE liver cancer cells		*In vitro*	Lab		24 h			9.27 µM	CALUX assay
102	2671	250	Mammalian	Albino rat, male		Adult	*In vivo*	Lab		10 d	Intraperitoneal		4-8 mg/kg/d	
124	2704	388	Mammalian	Albino rat, male		Adult	*In vivo*	Lab		21 d	Oral		0.66 mg/rat	
124	2705	256	Mammalian	Albino rat, male		Adult	*In vivo*	Lab		21 d	Oral		0.06 mg/rat	
124	2706	403	Mammalian	Albino rat, male		Adult	*In vivo*	Lab		21 d	Oral		0.2 mg/rat	
124	2707	402	Mammalian	Albino rat, male		Adult	*In vivo*	Lab		21 d	Oral		0.2 mg/rat	
124	2708	404	Mammalian	Albino rat, male		Adult	*In vivo*	Lab		21 d	Oral		0.5 mg/rat	
143	2768	265	Mammalian	Albino rat, male		Weanling	*In vivo*	Lab		90 d	Food		50-500 ppm	
124	2774	266	Mammalian	Albino rat, male		Adult	*In vivo*	Lab		21 d	Oral		0.5 mg/rat	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
202	3319	157	Mammalian	Alpk:AP rat, female		21-22 d	*In vivo*	Lab		3 d	Oral		400-800 mg/kg/d	Rat uterotrophic assay
202	3320	157	Mammalian	Alpk:AP rat, female		21-22 d	*In vivo*	Lab		3 d	Subcutaneous		400-800 mg/kg/d	Rat uterotrophic assay
202	3321	383	Mammalian	Alpk:AP rat, female		21-22 d	*In vivo*	Lab		3 d	Oral		0.04 mg/kg/d	Rat uterotrophic assay
202	3322	383	Mammalian	Alpk:AP rat, female		21-22 d	*In vivo*	Lab		3 d	Subcutaneous		0.04 mg/kg/d	Rat uterotrophic assay
203	3323	377	Mammalian	Alpk:AP rat, female		21-22 d	*In vivo*	Lab		3 d	Oral		60 mg/kg/d	
203	3324	533	Mammalian	Alpk:AP rat, female		21-22 d	*In vivo*	Lab		3 d	Oral		400 µg/kg/d	
203	3325	532	Mammalian	Alpk:AP rat, female		21-22 d	*In vivo*	Lab		3 d	Oral		10 mg/kg/d	
89	2626	245	Mammalian	Alpk:APfSD rat		Immature	*In vivo*	Lab		7-14 d	Oral		100 mg/kg	
273	3940	358	Mammalian	Alpk:APfSD rat, male	SAT	7 w	*In vivo*	Lab		7-10 d	Oral		100-300 mg/kg/d	Rats castrated at 6 weeks of age with a 1-week recovery period
273	3941	595	Mammalian	Alpk:APfSD rat, male	SAT	7 w	*In vivo*	Lab		7-10 d	Oral		25-100 mg/kg/d	Rats castrated at 6 weeks of age with a 1-week recovery period
273	3942	245	Mammalian	Alpk:APfSD rat, male	SAT	7 w	*In vivo*	Lab		5-10 d	Oral		100 mg/kg/d	Rats castrated at 6 weeks of age with a 1-week recovery period
273	3943	285	Mammalian	Alpk:APfSD rat, male	SAT	7 w	*In vivo*	Lab		5-10 d	Oral		500-1000 mg/kg/d	Rats castrated at 6 weeks of age with a 1-week recovery period
273	3944	279	Mammalian	Alpk:APfSD rat, male	SAT	7 w	*In vivo*	Lab		5-10 d	Oral		500-1000 mg/kg/d	Rats castrated at 6 weeks of age with a 1-week recovery period
273	3945	646	Mammalian	Alpk:APfSD rat, male	SAT	7 w	*In vivo*	Lab		5-10 d	Oral		25 mg/kg/d	Rats castrated at 6 weeks of age with a 1-week recovery period
275	3948	245	Mammalian	Alpk:APfSD rat, male	Accessory sex organs	22-23 d (immature)	*In vivo*	Lab		14 d	Oral		100 mg/kg/d	Peripubertal male rat assay

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
275	3949	245	Mammalian	Alpk:APfSD rat, male	Accessory sex organs	35-36 d	*In vivo*	Lab		14 d	Oral		100 mg/kg/d	Peripubertal male rat assay
275	3950	646	Mammalian	Alpk:APfSD rat, male	Accessory sex organs	22-23 d (immature)	*In vivo*	Lab		14 d	Oral		25 mg/kg/d	Peripubertal male rat assay
275	3951	595	Mammalian	Alpk:APfSD rat, male	Accessory sex organs	22-23 d (immature)	*In vivo*	Lab		14 d	Oral		25 mg/kg/d	Peripubertal male rat assay
275	3952	383	Mammalian	Alpk:APfSD rat, male	Accessory sex organs	22-23 d (immature)	*In vivo*	Lab		14 d	Oral		40 µg/kg/d	Peripubertal male rat assay
275	3953	279	Mammalian	Alpk:APfSD rat, male	Accessory sex organs	22-23 d (immature)	*In vivo*	Lab		14 d	Oral		500 mg/kg/d	Peripubertal male rat assay
275	3954	285	Mammalian	Alpk:APfSD rat, male	Accessory sex organs	22-23 d (immature)	*In vivo*	Lab		14 d	Oral		500 mg/kg/d	Peripubertal male rat assay
275	3955	595	Mammalian	Alpk:APfSD rat, male	Accessory sex organs	35-36 d	*In vivo*	Lab		14 d	Oral		25 mg/kg/d	Peripubertal male rat assay
275	3956	646	Mammalian	Alpk:APfSD rat, male	Accessory sex organs	35-36 d	*In vivo*	Lab		14 d	Oral		25 mg/kg/d	Peripubertal male rat assay
275	3957	383	Mammalian	Alpk:APfSD rat, male	Accessory sex organs	35-36 d	*In vivo*	Lab		14 d	Oral		40 µg/kg/d	Peripubertal male rat assay
275	3958	157	Mammalian	Alpk:APfSD rat, male	Accessory sex organs	35-36 d	*In vivo*	Lab		14 d	Oral		100 mg/kg/d	Peripubertal male rat assay

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
275	3959	609	Mammalian	Alpk:APfSD rat, male	Accessory sex organs	35-36 d	*In vivo*	Lab		14 d	Oral		15 mg/kg/d	Peripubertal male rat assay
275	3960	279	Mammalian	Alpk:APfSD rat, male	Accessory sex organs	35-36 d	*In vivo*	Lab		20 d	Oral		500 mg/kg/d	Peripubertal male rat assay
275	3961	285	Mammalian	Alpk:APfSD rat, male	Accessory sex organs	35-36 d	*In vivo*	Lab		20 d	Oral		500 mg/kg/d	Peripubertal male rat assay
275	3962	383	Mammalian	Alpk:APfSD rat, male	Accessory sex organs	35-36 d	*In vivo*	Lab		20 d	Oral		40 µg/kg/d	Peripubertal male rat assay
275	3963	358	Mammalian	Alpk:APfSD rat, male	Accessory sex organs	35-36 d	*In vivo*	Lab		20 d	Oral		100 mg/kg/d	Peripubertal male rat assay
275	3964	609	Mammalian	Alpk:APfSD rat, male	Accessory sex organs	35-36 d	*In vivo*	Lab		20 d	Oral		25 mg/kg/d	Peripubertal male rat assay
275	3965	355	Mammalian	Alpk:APfSD rat, male	Accessory sex organs	22-23 d (immature)	*In vivo*	Lab		14 d	Oral		50-100 mg/kg/d	Peripubertal male rat assay
275	3966	609	Mammalian	Alpk:APfSD rat, male	Accessory sex organs	22-23 d (immature)	*In vivo*	Lab		14 d	Oral		25 mg/kg/d	Peripubertal male rat assay
275	3967	157	Mammalian	Alpk:APfSD rat, male	Accessory sex organs	22-23 d (immature)	*In vivo*	Lab		14 d	Oral		200 mg/kg/d	Peripubertal male rat assay
275	3968	355	Mammalian	Alpk:APfSD rat, male	Accessory sex organs	35-36 d	*In vivo*	Lab		20 d	Oral		50-100 mg/kg/d	Peripubertal male rat assay

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
275	3969	157	Mammalian	Alpk:APfSD rat, male	Accessory sex organs	35-36 d	*In vivo*	Lab		20 d	Oral		100-200 mg/kg/d	Peripubertal male rat assay
275	3970	383	Mammalian	Alpk:APfSD rat, male	Accessory sex organs	35-36 d	*In vivo*	Lab		20 d	Oral		40 µg/kg/d	Peripubertal male rat assay
275	3971	358	Mammalian	Alpk:APfSD rat, male	Accessory sex organs	35-36 d	*In vivo*	Lab		20 d	Oral		150 mg/kg/d	Peripubertal male rat assay
275	3972	358	Mammalian	Alpk:APfSD rat, male	Accessory sex organs	22-23 d (immature)	*In vivo*	Lab		14 d	Oral		100-150 mg/kg/d	Peripubertal male rat assay
275	3973	358	Mammalian	Alpk:APfSD rat, male	Accessory sex organs	22-23 d (immature)	*In vivo*	Lab	14 d followed by 20-day recovery period		Oral		100 mg/kg/d	Peripubertal male rat assay
275	3974	285	Mammalian	Alpk:APfSD rat, male	Accessory sex organs	22-23 d (immature)	*In vivo*	Lab	14 d followed by 20-day recovery period		Oral		500 mg/kg/d	Peripubertal male rat assay
275	3975	383	Mammalian	Alpk:APfSD rat, male	Accessory sex organs	22-23 d (immature)	*In vivo*	Lab	14 d followed by 20-day recovery period		Oral		40 µg/kg/d	Peripubertal male rat assay
275	3976	383	Mammalian	Alpk:APfSD rat, male	Accessory sex organs	22-23 d (immature)	*In vivo*	Lab		34 d	Oral		40 µg/kg/d	Peripubertal male rat assay
275	3977	285	Mammalian	Alpk:APfSD rat, male	Accessory sex organs	22-23 d (immature)	*In vivo*	Lab		34 d	Oral		500 mg/kg/d	Peripubertal male rat assay
275	3978	358	Mammalian	Alpk:APfSD rat, male	Accessory sex organs	22-23 d (immature)	*In vivo*	Lab		34 d	Oral		100 mg/kg/d	Peripubertal male rat assay

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
187	3062	313	Mammalian	B6C3F1 mouse, female		77 d	*In vivo*	Lab		18 w	Oral		1-10 µg/kg body weight	Dosing 5 times, 3 weeks in between
187	3063	319	Mammalian	B6C3F1 mouse, female		77 d	*In vivo*	Lab		18 w	Oral		10-100 µg/kg body weight	Dosing 5 times, 3 weeks in between
187	3064	470	Mammalian	B6C3F1 mouse, female		77 d	*In vivo*	Lab		18 w	Oral		100-1000 µg/kg body weight	Dosing 5 times, 3 weeks in between
187	3065	292	Mammalian	B6C3F1 mouse, female		77 d	*In vivo*	Lab		18 w	Oral		3-30 mg/kg body weight	Dosing 5 times, 3 weeks in between
187	3066	318	Mammalian	B6C3F1 mouse, female		77 d	*In vivo*	Lab		18 w	Oral		2-20 mg/kg body weight	Dosing 5 times, 3 weeks in between
252	3778	398	Mammalian	B6C3F1 mouse, female		8 w	*In vivo*	Lab		4 m	Inhalation		8000 ppm	Exposure: 6 h/day, 5 days/week; observed effects not mediated through the ER
252	3779	398	Mammalian	B6C3F1 mouse, female		8 w	*In vivo*	Lab		8 m	Inhalation		8000 ppm	Exposure: 6 h/day, 5 days/week; observed effects not mediated through the ER
252	3780	398	Mammalian	B6C3F1 mouse, female		8 w	*In vivo*	Lab		3 d	Inhalation		8000 ppm	Exposure: 6 h/day, 5 days/week; observed effects not mediated through the ER
252	3781	398	Mammalian	B6C3F1 mouse, female		8 w	*In vivo*	Lab		21 d	Inhalation		8000 ppm	Exposure: 6 h/day, 5 days/week; observed effects not mediated through the ER
314	4277	157	Mammalian	B6C3F1 mouse, female	Uterus	35-60 d	*In vivo*	Lab		4 d	Subcutaneous	23	0.02-8 mg/d	Ovariectomized mice
149	2778	268	Mammalian	B6C3F1 mouse, male		Adult	*In vivo*	Lab		13 w	Inhalation		39-467 mg/m3	
207	3352	273	Mammalian	C57/BL6 mouse, male		5 w	*In vivo*	Lab		4 w	Drinking water		50 µg/ml	Concentration range: 5 and 50 µg/ml; average water intake: 5.77 ml/day
410	4726	157	Mammalian	C57BL/6 mouse, male		5 w	*In vivo*	Lab		8 w	Drinking water		50 µg/ml	Dose range: 0.5 and 50 µg/ml
41	2532	229	Mammalian	CD- mouse			*In vivo*	Lab		Oral, days 7-17 of gestation			LOEL = 1 mg/kg	Multiple doses: 0.5-2g/kg
41	2533	229	Mammalian	CD rat			*In vivo*	Lab		Oral, days 7-17 of gestation			0.075-0.45 mg/kg	Multiple doses: 0.075-0.45 mg/kg
106	2676	250	Mammalian	CD rat			*In vivo*	Lab		3-g study	Food		25-100 ppm	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
118	2695	252	Mammalian	CD rat		Mature and immature	*In vivo*	Lab		2 w	Oral		200 mg/kg body weight/d	
118	2697	252	Mammalian	CD rat	Prostate		*In vitro*	Lab					IC50 = 64 µM	
328	4301	609	Mammalian	CD rat, female		21 d	*In vivo*	Lab		20 d	Oral	22	100 mg/kg/d	Dose range: 24-100 mg/kg/day
328	4302	646	Mammalian	CD rat, female		21 d	*In vivo*	Lab		20 d	Oral	22	20 mg/kg/d	
328	4303	690	Mammalian	CD rat, female		21 d	*In vivo*	Lab		20 d	Oral	22	220 mg/kg/d	
328	4304	689	Mammalian	CD rat, female		21 d	*In vivo*	Lab		20 d	Oral	22	0.6-6 mg/kg/d	
328	4305	408	Mammalian	CD rat, female		21 d	*In vivo*	Lab		20 d	Oral	22	240 mg/kg/d	
118	2696	252	Mammalian	CD rat, male offspring		Adult	*In vivo*	Lab		Multi-g study	Food		EL = 35.5 mg/kg body weight/d	Concentration range P: 0.736-35.5 mg/kg/day; F1: 0.948-54 mg/kg/day (day 21-183)
39	2531	229	Mammalian	CD-1 mouse			*In vivo*	Lab		Oral, day 9 of gestation			2.5 mg/kg	
42	2534	229	Mammalian	CD-1 mouse			*In vivo*	Lab		Oral, day 8 of gestation			7-9 mg/kg	Single dose: 7-9 mg/kg
166	2973	383	Mammalian	CD-1 mouse		Prenatal	*In vivo*	Lab		Gestation day 11-17	Food		0.018-0.18 ng/g body weight	
166	2974	242	Mammalian	CD-1 mouse		Prenatal	*In vivo*	Lab		Gestation day 11-17	Food		18 ng/g body weight	Concentration range: 18 and 180 ng/g body weight
214	3383	245	Mammalian	CD-1 mouse		8 w	*In vivo*	Lab		21 d	Gavage		160 mg/kg bodyweight/d	
214	3384	549	Mammalian	CD-1 mouse		8 w	*In vivo*	Lab		7 d	Food		250-750 mg/kg bodyweight/d	
406	4666	383	Mammalian	CD-1 mouse		Prenatal	*In vivo*	Lab	Gestation d 11 to 17		Maternal transfer		0.018 and 0.18 ng/g body weight	Mothers dosed by feeding

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
406	4667	242	Mammalian	CD-1 mouse		Prenatal	*In vivo*	Lab	Gestation d 11 to 17		Maternal transfer		18 ng/g body weight	Mothers dosed by feeding; dose range: 18 and 180 ng/g body weight
422	4824	783	Mammalian	CD1 mouse, female	Uterus	Immature	*In vivo*	Lab		3 d	Application onto the dorsal skin		1-10 µM	Dose range: 1-1000 µM
422	4825	297	Mammalian	CD1 mouse, female	Uterus	Immature	*In vivo*	Lab		3 d	Application onto the dorsal skin		1-1000 µM	
37	2523	226	Mammalian	CD-1 mouse, female	Uterus		*In vivo*	Lab		3 d	Subcutaneous		NOEL = 10 mg/kg body weight/d	
185	3049	468	Mammalian	CD-1 mouse, female	Uterus	Adult	*In vitro*	Lab		30 min.		30	IC50 = 1.7 µM	Ligand binding assay; concentration range: 0.1-1000 nM
185	3050	486	Mammalian	CD-1 mouse, female	Uterus	Adult	*In vitro*	Lab		30 min.		30	IC50 = 70 nM	Ligand binding assay; concentration range: 0.1-1000 nM
185	3051	487	Mammalian	CD-1 mouse, female	Uterus	Adult	*In vitro*	Lab		30 min.		30	IC50 = 5.6 µM	Ligand binding assay; concentration range: 0.1-1000 nM
185	3058	468	Mammalian	CD-1 mouse, female		13 w	*In vivo*	Lab		4 d	Oral	20	202 mg/kg/d	Mouse uterotrophic and vaginal cornification assay; concentration range: 1.7-202 mg/kg
185	3059	382	Mammalian	CD-1 mouse, female		13 w	*In vivo*	Lab		4 d	Oral	20	1 mg/kg/d	Mouse uterotrophic and vaginal cornification assay
198	3219	383	Mammalian	CD-1 mouse, female	Uterus	21 d	*In vivo*	Lab		3 d	Subcutaneous		0.1-25 µg/kg body weight/d	Markers for uterotrophic effects: uterine peroxidase activity, BrdU incorporation as index of cell proliferation, LF expression
198	3220	523	Mammalian	CD-1 mouse, female	Uterus	21 d	*In vivo*	Lab		3 d	Subcutaneous		0.1-25 mg/kg body weight/d	Markers for uterotrophic effects: uterine peroxidase activity, BrdU incorporation as index of cell proliferation, LF expression

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
198	3221	355	Mammalian	CD-1 mouse, female	Uterus	21 d	*In vivo*	Lab		3 d	Subcutaneous		0.5-500 mg/kg body weight/d	Markers for uterotrophic effects: uterine peroxidase activity, BrdU incorporation as index of cell proliferation, LF expression
198	3222	157	Mammalian	CD-1 mouse, female	Uterus	21 d	*In vivo*	Lab		3 d	Subcutaneous		10 µg - 1 g/kg body weight/d	Markers for uterotrophic effects: uterine peroxidase activity, BrdU incorporation as index of cell proliferation, LF expression
198	3223	376	Mammalian	CD-1 mouse, female	Uterus	21 d	*In vivo*	Lab		3 d	Subcutaneous		1 g/kg body weight/d	Markers for uterotrophic effects: uterine peroxidase activity, BrdU incorporation as index of cell proliferation, LF expression
198	3224	242	Mammalian	CD-1 mouse, female	Uterus	21 d	*In vivo*	Lab		3 d	Subcutaneous		500 mg/kg body weight/d	Markers for uterotrophic effects: uterine peroxidase activity, BrdU incorporation as index of cell proliferation, LF expression
198	3225	377	Mammalian	CD-1 mouse, female	Uterus	21 d	*In vivo*	Lab		3 d	Subcutaneous		0.5 mg/kg body weight/d	Markers for uterotrophic effects: uterine peroxidase activity, BrdU incorporation as index of cell proliferation, LF expression
198	3226	448	Mammalian	CD-1 mouse, female	Uterus	21 d	*In vivo*	Lab		3 d	Subcutaneous		1 g/kg body weight/d	Markers for uterotrophic effects: uterine peroxidase activity, BrdU incorporation as index of cell proliferation, LF expression
222	3497	242	Mammalian	CD-1 mouse, female		Adult	*In vivo*	Lab		1 week	Subcutaneous inserted capsules		LOEL = 18 ng/ml blood	Continous-release, low-dose system in ovarieectomized mice
222	3498	357	Mammalian	CD-1 mouse, female		Adult	*In vivo*	Lab		1 week	Subcutaneous inserted capsules		LOEL = 42 ng/ml blood	Continous-release, low-dose system in ovarieectomized mice
239	3722	383	Mammalian	CD-1 mouse, female	Uterus	1 day	*In vivo*	Lab		5 d	Subcutaneous		2 µg/d	Endpoints evaluated on days 5, 6, 7, 8, 15 and 22 of age
37	4057	413	Mammalian	CD-1 mouse, female	Uterus	8-10 w	*In vitro*	Lab		18 h		4	0.5 nM - 5 mM	Competitive binding assay
37	4058	423	Mammalian	CD-1 mouse, female	Uterus	8-10 w	*In vitro*	Lab		18 h		4	0.5 nM - 5 mM	Competitive binding assay
37	4059	383	Mammalian	CD-1 mouse, female	Uterus	8-10 w	*In vitro*	Lab		18 h		4	0.5 nM - 5 mM	Competitive binding assay

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37	4060	355	Mammalian	CD-1 mouse, female	Uterus	8-10 w	*In vitro*	Lab		18 h		4	0.5 nM - 5 mM	Competitive binding assay
37	4061	354	Mammalian	CD-1 mouse, female	Uterus	8-10 w	*In vitro*	Lab		18 h		4	0.5 nM - 5 mM	Competitive binding assay
37	4062	226	Mammalian	CD-1 mouse, female	Uterus	8-10 w	*In vitro*	Lab		18 h		4	0.5 nM - 5 mM	Competitive binding assay
37	4063	278	Mammalian	CD-1 mouse, female	Uterus	8-10 w	*In vitro*	Lab		18 h		4	5 mM	Competitive binding assay; dose range: 0.5 nM - 5 mM
37	4064	242	Mammalian	CD-1 mouse, female	Uterus	8-10 w	*In vitro*	Lab		18 h		4	0.05 µM - 5 mM	Competitive binding assay; dose range: 0.5 nM - 5 mM
37	4065	230	Mammalian	CD-1 mouse, female	Uterus	8-10 w	*In vitro*	Lab		18 h		4	0.5 nM - 5 mM	Competitive binding assay
37	4075	413	Mammalian	CD-1 mouse, female	Uterus	Immature (17 d)	*In vivo*	Lab		3 d	Subcutaneous	22	0.001-100 mg/kg/d	Mouse uterotrophic assay
37	4076	423	Mammalian	CD-1 mouse, female	Uterus	Immature (17 d)	*In vivo*	Lab		3 d	Subcutaneous	22	0.001-10 mg/kg/d	Mouse uterotrophic assay
37	4077	383	Mammalian	CD-1 mouse, female	Uterus	Immature (17 d)	*In vivo*	Lab		3 d	Subcutaneous	22	1-1000 µg/kg/d	Mouse uterotrophic assay
37	4078	355	Mammalian	CD-1 mouse, female	Uterus	Immature (17 d)	*In vivo*	Lab		3 d	Subcutaneous	22	10-1000 mg/kg/d	Mouse uterotrophic assay; dose range: 0.001-1000 mg/kg
37	4079	354	Mammalian	CD-1 mouse, female	Uterus	Immature (17 d)	*In vivo*	Lab		3 d	Subcutaneous	22	10-1000 mg/kg/d	Mouse uterotrophic assay; dose range: 0.001-1000 mg/kg
37	4080	278	Mammalian	CD-1 mouse, female	Uterus	Immature (17 d)	*In vivo*	Lab		3 d	Subcutaneous	22	10-1000 mg/kg/d	Mouse uterotrophic assay; dose range: 0.001-1000 mg/kg
37	4081	242	Mammalian	CD-1 mouse, female	Uterus	Immature (17 d)	*In vivo*	Lab		3 d	Subcutaneous	22	100-1000 mg/kg/d	Mouse uterotrophic assay; dose range: 0.001-1000 mg/kg
37	4082	230	Mammalian	CD-1 mouse, female	Uterus	Immature (17 d)	*In vivo*	Lab		3 d	Subcutaneous	22	0.001-10 mg/kg/d	Mouse uterotrophic assay
400	4653	383	Mammalian	CF1 mouse, female		Adult	*In vivo*	Lab	Day 11 to 17 of pregnancy		Oral		0.001-100 µg/30 µl vehicle	Daily dosing of chemicals in 30 µl corn oil

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
400	4654	242	Mammalian	CF1 mouse, female		Adult	*In vivo*	Lab	Day 11 to 17 of pregnancy		Oral		1-5000 µg/30 µl vehicle	Daily dosing of chemicals in 30 µl corn oil
400	4655	355	Mammalian	CF1 mouse, female		Adult	*In vivo*	Lab	Day 11 to 17 of pregnancy		Oral		1-5000 µg/30 µl vehicle	Daily dosing of chemicals in 30 µl corn oil
147	2775	266	Mammalian	CFT-Wistar albino rat		Adult	*In vivo*	Lab		Females 14 d, males 70 d before mating	Oral		Females: 25- 50 mg/kg; males: 45.25-90.5 mg/kg	
43	2535	229	Mammalian	CFW Swiss mouse			*In vivo*	Lab		120 d	Food		5 ppm	Beginning 30 days before mating
94	2639	247	Mammalian	Chinese hamster	Ovary cells		*In vitro*	Lab					0.5-50 µM	Cells transfected with human thyroid peroxidase (TPO) gene
94	2640	248	Mammalian	Chinese hamster	Ovary cells		*In vitro*	Lab					LOEC = 5 µM	Concentration range: 0.5-10 µM, cells transfected with human thyroid peroxidase (TPO) gene
94	2641	248	Mammalian	Chinese hamster	Ovary cells		*In vitro*	Lab					50 µM	Concentration range: 5 and 50 µM, cells transfected with human thyroid peroxidase (TPO) gene
94	2652	249	Mammalian	Chinese hamster	Ovary cells		*In vitro*	Lab					LOEC = 5 µM	Concentration range: 0.5-10 µM, cells transfected with human thyroid peroxidase (TPO) gene
272	3937	607	Mammalian	Chinese hamster	Ovary		*In vitro*	Lab		24 h			0.05-5 µM	Androgen receptor assay; Chinese hamster cells transfected with hAR; dose range: 0.01-5 µM
272	3938	245	Mammalian	Chinese hamster	Ovary		*In vitro*	Lab		24 h			0.1-5 µM	Androgen receptor assay; Chinese hamster cells transfected with hAR; dose range: 0.01-5 µM
272	3939	358	Mammalian	Chinese hamster	Ovary		*In vitro*	Lab		24 h			0.05-5 µM	Androgen receptor assay; Chinese hamster cells transfected with hAR; dose range: 0.01-5 µM

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
417	4763	347	Mammalian	Chinese hamster	CHO cells cotransfected with a hAR		*In vitro*	Lab		24 h		37	IC50 = 3.2 µM	AR assay
417	4764	350	Mammalian	Chinese hamster	CHO cells cotransfected with a hAR		*In vitro*	Lab		24 h		37	IC50 = 3.9 µM	AR assay
417	4765	760	Mammalian	Chinese hamster	CHO cells cotransfected with a hAR		*In vitro*	Lab		24 h		37	IC50 = 4.6 µM	AR assay
417	4766	351	Mammalian	Chinese hamster	CHO cells cotransfected with a hAR		*In vitro*	Lab		24 h		37	IC50 = 10.3 µM	AR assay
417	4767	781	Mammalian	Chinese hamster	CHO cells cotransfected with a hAR		*In vitro*	Lab		24 h		37	IC50 = 10.4 µM	AR assay
417	4768	478	Mammalian	Chinese hamster	CHO cells cotransfected with a hAR		*In vitro*	Lab		24 h		37	10 µM	AR assay; dose range: 0.05-10 µM
417	4769	611	Mammalian	Chinese hamster	CHO cells cotransfected with a hAR		*In vitro*	Lab		24 h		37	10 µM	AR assay; dose range: 0.05-10 µM
417	4770	346	Mammalian	Chinese hamster	CHO cells cotransfected with a hAR		*In vitro*	Lab		24 h		37	10 µM	AR assay; dose range: 0.05-10 µM
417	4771	352	Mammalian	Chinese hamster	CHO cells cotransfected with a hAR		*In vitro*	Lab		24 h		37	0.1-10 µM	AR assay; dose range: 0.05-10 µM
325	4296	157	Mammalian	Crl:CD BR Sprague-Dawley rat		Pre- and postnatal	*In vivo*	Lab		Gestation day 11 to postnatal day 20	Maternal transfer (in utero and lactation)	22-25	3.2-320 mg/kg/d	Dams were dosed by gavage
325	4297	383	Mammalian	Crl:CD BR Sprague-Dawley rat		Pre- and postnatal	*In vivo*	Lab		Gestation day 11 to postnatal day 20	Maternal transfer (in utero and lactation)	22-25	15 µg/kg/d	Dams were dosed by gavage
91	2634	246	Mammalian	Dog			*In vivo*	Lab		13 w	Food		400 ppm	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
91	2635	246	Mammalian	Dog			*In vivo*	Lab		52 w	Food		1000 ppm	
91	2645	248	Mammalian	Dog			*In vivo*	Lab		52 w	Food		10000 ppm	
54	2553	230	Mammalian	ERKO mouse (ERalpha-deficient)	Uterus		*In vivo*	Lab		6 h	Subcutaneous		15 mg/kg body weight	Mice were ovariectomized 2 weeks before treatment
260	3804	366	Mammalian	Ewe		1-4 y	*In vivo*	Lab		43 d	Oral		0.3 mg/kg	Dosing by gelatin capsules 2 times weekly
260	3805	353	Mammalian	Ewe		1-4 y	*In vivo*	Lab		43 d	Oral		12.5 mg/kg	Dosing by gelatin capsules 2 times weekly
260	3806	254	Mammalian	Ewe		1-4 y	*In vivo*	Lab		43 d	Oral		0.2 mg/kg	Dosing by gelatin capsules 2 times weekly
260	3807	250	Mammalian	Ewe		1-4 y	*In vivo*	Lab		43 d	Oral		2.5 mg/kg	Dosing by gelatin capsules 2 times weekly
260	3808	608	Mammalian	Ewe		1-4 y	*In vivo*	Lab		43 d	Oral		5 mg/kg	Dosing by gelatin capsules 2 times weekly
260	3809	361	Mammalian	Ewe		1-4 y	*In vivo*	Lab		43 d	Oral		17.5 mg/kg	Dosing by gelatin capsules 2 times weekly
260	3810	238	Mammalian	Ewe		1-4 y	*In vivo*	Lab		43 d	Oral		10 mg/kg	Dosing by gelatin capsules 2 times weekly
260	3811	356	Mammalian	Ewe		1-4 y	*In vivo*	Lab		43 d	Oral		2 mg/kg	Dosing by gelatin capsules 2 times weekly
98	2655	249	Mammalian	F344 Rat			*In vivo*	Lab		104 w	Food		20-2000 ppm	Male: 0.7-74 mg/kg/day, female: 0.83-91 mg/kg/day
236	3716	157	Mammalian	F344 rat, female		6 w	*In vivo*	Lab		50 d	Intraperitoneal		0.1-10 mg/organism	Dosing 3 times weekly; ovariectomized rats grafted with rat pituitary tumor cells (MtT/E-2)
148	2776	268	Mammalian	F-344 rat, male		11-13 w	*In vivo*	Lab		6 h/day for 5 d	Inhalation		200 ppm	Endpoints measured on day 6 until 73
149	2777	268	Mammalian	F-344 rat, male		Adult	*In vivo*	Lab		13 w	Inhalation		117-467 mg/m3	
173	2997	358	Mammalian	Felis concolor coryi		1-12 y	*In vivo*	Field			Environmental concentrations			Environmental contaminants suggested to be major factor in observed effects
173	2998	289	Mammalian	Felis concolor coryi		1-12 y	*In vivo*	Field			Environmental concentrations			Environmental contaminants suggested to be major factor in observed effects
173	2996	325	Mammalian	Felis concolor coryi (Florida panther)		1-12 y	*In vivo*	Field			Environmental concentrations			Environmental contaminants suggested to be major factor in observed effects

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
324	4295	280	Mammalian	Fischer 344 rat		6 w	*In vivo*	Lab		up to 2 y	Food	72°F	NOAEL = 500 ppm	Dose range: 100-12,500 ppm
174	3000	157	Mammalian	Fischer 344 rat, female	Vaginal epithelium	10-12 w	*In vivo*	Lab			Intraperitoneal		ED50 = 37.5 mg/kg body weight	In vitro detection of in vivo exposed animals
329	4345	186	Mammalian	Fischer 344 rat, female	Thyroid	42-43 d	*In vivo*	Lab		2 or 7 d	Oral	22-24	2-15 mg/kg/d	
101	2669	250	Mammalian	Fischer-344 rat, female		21 d	*In vivo*	Lab		Chronic	Intraperitoneal		5-40 mg/kg	
101	2670	250	Mammalian	Fischer-344 rat, female		21 d	*In vivo*	Lab		Chronic	Intraperitoneal		5-40 mg/kg	Day 21-28: subcutaneous injection of 10 µg estradiol benzoate
103	2672	250	Mammalian	Fischer-344 rat, female		21 d	*In vivo*	Lab		Chronic	Intraperitoneal		LOEL = 40 mg/kg/d	Cocncentration range: 5-40 mg/kg/day
138	2751	260	Mammalian	Fisher 344 rat, female		10-13 w	*In vivo*	Lab		2 w	Oral		100-300 mg/kg/d	
138	2759	261	Mammalian	Fisher 344 rat, female		10-13 w	*In vivo*	Lab		2 w	Oral		100-300 mg/kg/d	
95	2642	248	Mammalian	Friesian calf, male		3 m	*In vivo*	Lab		270 d	Food		4 mg/kg body weight	Concentration range: 4 and 40 mg/kg; 92% technical grade
2	2464	221	Mammalian	Hamster, female			*In vivo*	Lab			Oral		LOEL = 750 mg/kg	
409	4725	277	Mammalian	Holtzman rat	Anterior pituitary	5-10 d	*In vitro*	Lab		24 h		37	1-100 µM	Dose range: 0.1-100 µM
320	4285	313	Mammalian	Holtzman rat, female	Gonads	Prenatal	*In vivo*	Lab		4-6 d	In utero	22	1 µg/kg	Pregnant rats receiving a single dose on gestational day 15
7	2471	221	Mammalian	Holtzmann rat, female	Uterus		*In vivo*	Lab			Oral		LOEL = 400 mg/kg/d	
7	2472	221	Mammalian	Holtzmann rat, female			*In vivo*	Lab			Oral		LOEL = 1000 mg/kg/d	
10	2476	221	Mammalian	Holtzmann rat, female			*In vivo*	Lab			Oral		LOEL = 100 mg/kg/d	
19	2488	223	Mammalian	Human	MCF-7 cells		*In vitro*	Lab					LOEL = 30 µM	E-screen

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
18	2492	233	Mammalian	Human	Estrogen receptor		*In vitro*	Lab		1 h			NOEL = 220 nM	Chlordane containing both cis- and trans-isomer (>99% pure)
18	2493	234	Mammalian	Human	Estrogen receptor		*In vitro*	Lab		1 h			NOEL = 220 nM	Chlordane containing both cis- and trans-isomer (>99% pure)
19	2498	224	Mammalian	Human	MCF-7 cells		*In vitro*	Lab					LOEL = 30 µM	E-screen
18	2499	225	Mammalian	Human			*In vitro*	Lab		1 h			NOEL = 630 nM	
24	2500	225	Mammalian	Human	Postpartum serum		*In vitro*	Lab					100 µM	
25	2502	225	Mammalian	Human	MCF-7 cells		*In vitro*	Lab					LOEL = 10 µM	E-screen
26	2503	225	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			10 µM	E-screen
25	2521	226	Mammalian	Human	MCF-7 cells		*In vitro*	Lab					LOEL = 1 µM	E-screen
26	2522	226	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			10-25 µM	Technical grade; E-screen
26	2525	227	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			10-25 µM	E-screen
26	2526	228	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			10-25 µM	E-screen
25	2527	228	Mammalian	Human	MCF-7 cells		*In vitro*	Lab					Potency relative to estradiol	E-screen
52	2549	230	Mammalian	Human	Androgen receptor		*In vitro*	Lab					40 µM	QSAR
19	2551	230	Mammalian	Human	MCF-7 cells		*In vitro*	Lab					EC100 = 30 µM	E-screen

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
26	2552	230	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			10 µM	E-screen
19	2559	231	Mammalian	Human	MCF-7 cells		*In vitro*	Lab					LOEL = 30 µM	E-screen
18	2576	236	Mammalian	Human	Estrogen receptor		*In vitro*	Lab		1 h			NOEL = 200 nM	
66	2577	236	Mammalian	Human	MCF-7 cells		*In vitro*	Lab						
25	2578	236	Mammalian	Human	MCF-7 cells		*In vitro*	Lab					LOEL = 10 µM	E-screen
26	2579	236	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			10 µM	E-screen
26	2598	240	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			10 µM	Technical grade; E-screen
24	2601	241	Mammalian	Human	Postpartum serum		*In vitro*	Lab					100 µM	
52	2606	241	Mammalian	Human	Androgen receptor		*In vitro*	Lab					18 µM	QSAR
19	2607	241	Mammalian	Human	MCF-7 cells		*In vitro*	Lab					EC100 = 10 µM	
85	2615	245	Mammalian	Human		Adult	*In vivo*	Field		1 to 13 y	Occupational		NOEL > 73 µg 3,5-DCA/g creatinine	Epidemiological study; biomonitoring based on urinary metabolites containing 3,5-dichloroaniline (3,5-DCA)
52	2620	245	Mammalian	Human	Androgen receptor		*In vitro*	Lab					Ki = 500 µM	QSAR
24	2660	250	Mammalian	Human	Postpartum serum		*In vitro*	Lab					LOEL = 100 µM	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
24	2661	250	Mammalian	Human	Postpartum serum		*In vitro*	Lab					IC50 = 160 µM	
52	2694	252	Mammalian	Human	Androgen receptor		*In vitro*	Lab					100 µM	QSAR
24	2737	260	Mammalian	Human	Postpartum serum		*In vitro*	Lab					100 µM	
136	2741	260	Mammalian	Human	MCF-7 cells		*In vitro*	Lab					0.01-10 µM	
136	2755	261	Mammalian	Human	MCF-7 cells		*In vitro*	Lab					1-10000 nM	
18	2760	264	Mammalian	Human			*In vitro*	Lab		1 h			NOEL = 1 µM	
19	2772	266	Mammalian	Human	MCF-7 cells		*In vitro*	Lab					30 µM	E-screen
25	2791	276	Mammalian	Human	MCF-7 cells		*In vitro*	Lab					LOEL = 10 µM	E-screen
19	2792	276	Mammalian	Human	MCF-7 cells		*In vitro*	Lab					EC100 = 10 µM	E-screen
156	2798	277	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		5 d			LOEL = 1 µM	Concentration range: 0.1 nM - 10 µM
156	2799	277	Mammalian	Human	ZR-75 cells		*In vitro*	Lab		5 d			LOEL = 1 µM	Concentration range: 0.1 nM - 10 µM
156	2800	65	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		5 d			LOEL = 10 µM	Concentration range: 0.1 nM - 10 µM
156	2801	65	Mammalian	Human	ZR-75 cells		*In vitro*	Lab		5 d			LOEL = 10 µM	Concentration range: 0.1 nM - 10 µM
156	2802	372	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		5 d			LOEL = 1 µM	Concentration range: 0.1 nM - 10 µM
156	2803	372	Mammalian	Human	ZR-75 cells		*In vitro*	Lab		5 d			LOEL = 1 µM	Concentration range: 0.1 nM - 10 µM
156	2804	373	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		5 d			LOEL = 10 µM	Concentration range: 0.1 nM - 10 µM
156	2805	373	Mammalian	Human	ZR-75 cells		*In vitro*	Lab		5 d			LOEL = 10 µM	Concentration range: 0.1 nM - 10 µM
162	2838	65	Mammalian	Human	ERalpha		*In vitro*	Lab		18 h		Ambient		Human ERalpha expressed in Sf9 insect cell line; RBA-assay for hER

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
162	2839	65	Mammalian	Human	ERbeta		*In vitro*	Lab		18 h		Ambient		Human ERbeta expressed in Sf9 insect cell line; RBA-assay for hER
162	2840	381	Mammalian	Human	ERalpha		*In vitro*	Lab		18 h		Ambient		Human ERalpha expressed in Sf9 insect cell line; RBA-assay for hER
162	2841	381	Mammalian	Human	ERbeta		*In vitro*	Lab		18 h		Ambient		Human ERbeta expressed in Sf9 insect cell line; RBA-assay for hER
162	2842	383	Mammalian	Human	ERalpha		*In vitro*	Lab		18 h		Ambient		Human ERalpha expressed in Sf9 insect cell line; RBA-assay for hER
162	2843	383	Mammalian	Human	ERbeta		*In vitro*	Lab		18 h		Ambient		Human ERbeta expressed in Sf9 insect cell line; RBA-assay for hER
162	2844	422	Mammalian	Human	ERalpha		*In vitro*	Lab		18 h		Ambient		Human ERalpha expressed in Sf9 insect cell line; RBA-assay for hER
162	2845	422	Mammalian	Human	ERbeta		*In vitro*	Lab		18 h		Ambient		Human ERbeta expressed in Sf9 insect cell line; RBA-assay for hER
162	2846	419	Mammalian	Human	ERalpha		*In vitro*	Lab		18 h		Ambient		Human ERalpha expressed in Sf9 insect cell line; RBA-assay for hER
162	2847	419	Mammalian	Human	ERbeta		*In vitro*	Lab		18 h		Ambient		Human ERbeta expressed in Sf9 insect cell line; RBA-assay for hER
162	2848	420	Mammalian	Human	ERalpha		*In vitro*	Lab		18 h		Ambient		Human ERalpha expressed in Sf9 insect cell line; RBA-assay for hER
162	2849	420	Mammalian	Human	ERbeta		*In vitro*	Lab		18 h		Ambient		Human ERbeta expressed in Sf9 insect cell line; RBA-assay for hER
162	2850	417	Mammalian	Human	ERalpha		*In vitro*	Lab		18 h		Ambient		Human ERalpha expressed in Sf9 insect cell line; RBA-assay for hER
162	2851	417	Mammalian	Human	ERbeta		*In vitro*	Lab		18 h		Ambient		Human ERbeta expressed in Sf9 insect cell line; RBA-assay for hER
162	2852	418	Mammalian	Human	ERalpha		*In vitro*	Lab		18 h		Ambient		Human ERalpha expressed in Sf9 insect cell line; RBA-assay for hER

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
162	2853	418	Mammalian	Human	ERbeta		*In vitro*	Lab		18 h		Ambient		Human ERbeta expressed in Sf9 insect cell line; RBA-assay for hER
162	2854	413	Mammalian	Human	ERalpha		*In vitro*	Lab		18 h		Ambient		Human ERalpha expressed in Sf9 insect cell line; RBA-assay for hER
162	2855	413	Mammalian	Human	ERbeta		*In vitro*	Lab		18 h		Ambient		Human ERbeta expressed in Sf9 insect cell line; RBA-assay for hER
162	2856	423	Mammalian	Human	ERalpha		*In vitro*	Lab		18 h		Ambient		Human ERalpha expressed in Sf9 insect cell line; RBA-assay for hER
162	2857	423	Mammalian	Human	ERbeta		*In vitro*	Lab		18 h		Ambient		Human ERbeta expressed in Sf9 insect cell line; RBA-assay for hER
162	2858	424	Mammalian	Human	ERalpha		*In vitro*	Lab		18 h		Ambient		Human ERalpha expressed in Sf9 insect cell line; RBA-assay for hER
162	2859	424	Mammalian	Human	ERbeta		*In vitro*	Lab		18 h		Ambient		Human ERbeta expressed in Sf9 insect cell line; RBA-assay for hER
162	2860	242	Mammalian	Human	ERalpha		*In vitro*	Lab		18 h		Ambient		Human ERalpha expressed in Sf9 insect cell line; RBA-assay for hER
162	2861	242	Mammalian	Human	ERbeta		*In vitro*	Lab		18 h		Ambient		Human ERbeta expressed in Sf9 insect cell line; RBA-assay for hER
162	2862	277	Mammalian	Human	ERalpha		*In vitro*	Lab		18 h		Ambient		Human ERalpha expressed in Sf9 insect cell line; RBA-assay for hER
162	2863	277	Mammalian	Human	ERbeta		*In vitro*	Lab		18 h		Ambient		Human ERbeta expressed in Sf9 insect cell line; RBA-assay for hER
162	2864	425	Mammalian	Human	ERalpha		*In vitro*	Lab		18 h		Ambient		Human ERalpha expressed in Sf9 insect cell line; RBA-assay for hER
162	2865	425	Mammalian	Human	ERbeta		*In vitro*	Lab		18 h		Ambient		Human ERbeta expressed in Sf9 insect cell line; RBA-assay for hER
162	2866	157	Mammalian	Human	ERalpha		*In vitro*	Lab		18 h		Ambient		Human ERalpha expressed in Sf9 insect cell line; RBA-assay for hER

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
162	2867	157	Mammalian	Human	ERbeta		*In vitro*	Lab		18 h		Ambient		Human ERbeta expressed in Sf9 insect cell line; RBA-assay for hER
162	2868	230	Mammalian	Human	ERalpha		*In vitro*	Lab		18 h		Ambient		Human ERalpha expressed in Sf9 insect cell line; RBA-assay for hER
162	2869	230	Mammalian	Human	ERbeta		*In vitro*	Lab		18 h		Ambient		Human ERbeta expressed in Sf9 insect cell line; RBA-assay for hER
162	2870	426	Mammalian	Human	ERalpha		*In vitro*	Lab		18 h		Ambient		Human ERalpha expressed in Sf9 insect cell line; RBA-assay for hER
162	2871	426	Mammalian	Human	ERbeta		*In vitro*	Lab		18 h		Ambient		Human ERbeta expressed in Sf9 insect cell line; RBA-assay for hER
162	2872	427	Mammalian	Human	ERalpha		*In vitro*	Lab		18 h		Ambient		Human ERalpha expressed in Sf9 insect cell line; RBA-assay for hER
162	2873	427	Mammalian	Human	ERbeta		*In vitro*	Lab		18 h		Ambient		Human ERbeta expressed in Sf9 insect cell line; RBA-assay for hER
162	2874	428	Mammalian	Human	ERalpha		*In vitro*	Lab		18 h		Ambient		Human ERalpha expressed in Sf9 insect cell line; RBA-assay for hER
162	2875	428	Mammalian	Human	ERbeta		*In vitro*	Lab		18 h		Ambient		Human ERbeta expressed in Sf9 insect cell line; RBA-assay for hER
162	2876	429	Mammalian	Human	ERalpha		*In vitro*	Lab		18 h		Ambient		Human ERalpha expressed in Sf9 insect cell line; RBA-assay for hER
162	2877	429	Mammalian	Human	ERbeta		*In vitro*	Lab		18 h		Ambient		Human ERbeta expressed in Sf9 insect cell line; RBA-assay for hER
162	2878	430	Mammalian	Human	ERalpha		*In vitro*	Lab		18 h		Ambient		Human ERalpha expressed in Sf9 insect cell line; RBA-assay for hER
162	2879	430	Mammalian	Human	ERbeta		*In vitro*	Lab		18 h		Ambient		Human ERbeta expressed in Sf9 insect cell line; RBA-assay for hER
162	2880	431	Mammalian	Human	ERalpha		*In vitro*	Lab		18 h		Ambient		Human ERalpha expressed in Sf9 insect cell line; RBA-assay for hER

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
162	2881	431	Mammalian	Human	ERbeta		*In vitro*	Lab		18 h		Ambient		Human ERbeta expressed in Sf9 insect cell line; RBA-assay for hER
162	2882	432	Mammalian	Human	ERalpha		*In vitro*	Lab		18 h		Ambient		Human ERalpha expressed in Sf9 insect cell line; RBA-assay for hER
162	2883	432	Mammalian	Human	ERbeta		*In vitro*	Lab		18 h		Ambient		Human ERbeta expressed in Sf9 insect cell line; RBA-assay for hER
162	2884	433	Mammalian	Human	ERalpha		*In vitro*	Lab		18 h		Ambient		Human ERalpha expressed in Sf9 insect cell line; RBA-assay for hER
162	2885	433	Mammalian	Human	ERbeta		*In vitro*	Lab		18 h		Ambient		Human ERbeta expressed in Sf9 insect cell line; RBA-assay for hER
162	2886	434	Mammalian	Human	ERalpha		*In vitro*	Lab		18 h		Ambient		Human ERalpha expressed in Sf9 insect cell line; RBA-assay for hER
162	2887	434	Mammalian	Human	ERbeta		*In vitro*	Lab		18 h		Ambient		Human ERbeta expressed in Sf9 insect cell line; RBA-assay for hER
162	2888	474	Mammalian	Human	ERalpha		*In vitro*	Lab		18 h		Ambient		Human ERalpha expressed in Sf9 insect cell line; RBA-assay for hER
162	2889	474	Mammalian	Human	ERbeta		*In vitro*	Lab		18 h		Ambient		Human ERbeta expressed in Sf9 insect cell line; RBA-assay for hER
162	2890	436	Mammalian	Human	ERalpha		*In vitro*	Lab		18 h		Ambient		Human ERalpha expressed in Sf9 insect cell line; RBA-assay for hER
162	2891	436	Mammalian	Human	ERbeta		*In vitro*	Lab		18 h		Ambient		Human ERbeta expressed in Sf9 insect cell line; RBA-assay for hER
162	2892	437	Mammalian	Human	ERalpha		*In vitro*	Lab		18 h		Ambient		Human ERalpha expressed in Sf9 insect cell line; RBA-assay for hER
162	2893	437	Mammalian	Human	ERbeta		*In vitro*	Lab		18 h		Ambient		Human ERbeta expressed in Sf9 insect cell line; RBA-assay for hER
162	2894	438	Mammalian	Human	ERalpha		*In vitro*	Lab		18 h		Ambient		Human ERalpha expressed in Sf9 insect cell line; RBA-assay for hER

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
162	2895	438	Mammalian	Human	ERbeta		*In vitro*	Lab		18 h		Ambient		Human ERbeta expressed in Sf9 insect cell line; RBA-assay for hER
162	2896	439	Mammalian	Human	ERalpha		*In vitro*	Lab		18 h		Ambient		Human ERalpha expressed in Sf9 insect cell line; RBA-assay for hER
162	2897	439	Mammalian	Human	ERbeta		*In vitro*	Lab		18 h		Ambient		Human ERbeta expressed in Sf9 insect cell line; RBA-assay for hER
162	2898	440	Mammalian	Human	ERalpha		*In vitro*	Lab		18 h		Ambient		Human ERalpha expressed in Sf9 insect cell line; RBA-assay for hER
162	2899	440	Mammalian	Human	ERbeta		*In vitro*	Lab		18 h		Ambient		Human ERbeta expressed in Sf9 insect cell line; RBA-assay for hER
162	2900	441	Mammalian	Human	ERalpha		*In vitro*	Lab		18 h		Ambient		Human ERalpha expressed in Sf9 insect cell line; RBA-assay for hER
162	2901	441	Mammalian	Human	ERbeta		*In vitro*	Lab		18 h		Ambient		Human ERbeta expressed in Sf9 insect cell line; RBA-assay for hER
162	2902	442	Mammalian	Human	ERalpha		*In vitro*	Lab		18 h		Ambient		Human ERalpha expressed in Sf9 insect cell line; RBA-assay for hER
162	2903	442	Mammalian	Human	ERbeta		*In vitro*	Lab		18 h		Ambient		Human ERbeta expressed in Sf9 insect cell line; RBA-assay for hER
162	2904	443	Mammalian	Human	ERalpha		*In vitro*	Lab		18 h		Ambient		Human ERalpha expressed in Sf9 insect cell line; RBA-assay for hER
162	2905	443	Mammalian	Human	ERbeta		*In vitro*	Lab		18 h		Ambient		Human ERbeta expressed in Sf9 insect cell line; RBA-assay for hER
162	2906	377	Mammalian	Human	ERalpha		*In vitro*	Lab		18 h		Ambient		Human ERalpha expressed in Sf9 insect cell line; RBA-assay for hER
162	2907	377	Mammalian	Human	ERbeta		*In vitro*	Lab		18 h		Ambient		Human ERbeta expressed in Sf9 insect cell line; RBA-assay for hER
162	2908	374	Mammalian	Human	ERalpha		*In vitro*	Lab		18 h		Ambient		Human ERalpha expressed in Sf9 insect cell line; RBA-assay for hER

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
162	2909	374	Mammalian	Human	ERbeta		*In vitro*	Lab		18 h		Ambient		Human ERbeta expressed in Sf9 insect cell line; RBA-assay for hER
162	2910	376	Mammalian	Human	ERalpha		*In vitro*	Lab		18 h		Ambient		Human ERalpha expressed in Sf9 insect cell line; RBA-assay for hER
162	2911	376	Mammalian	Human	ERbeta		*In vitro*	Lab		18 h		Ambient		Human ERbeta expressed in Sf9 insect cell line; RBA-assay for hER
162	2912	444	Mammalian	Human	ERalpha		*In vitro*	Lab		18 h		Ambient		Human ERalpha expressed in Sf9 insect cell line; RBA-assay for hER
162	2913	444	Mammalian	Human	ERbeta		*In vitro*	Lab		18 h		Ambient		Human ERbeta expressed in Sf9 insect cell line; RBA-assay for hER
162	2914	445	Mammalian	Human	ERalpha		*In vitro*	Lab		18 h		Ambient		Human ERalpha expressed in Sf9 insect cell line; RBA-assay for hER
162	2915	445	Mammalian	Human	ERbeta		*In vitro*	Lab		18 h		Ambient		Human ERbeta expressed in Sf9 insect cell line; RBA-assay for hER
162	2916	446	Mammalian	Human	ERalpha		*In vitro*	Lab		18 h		Ambient		Human ERalpha expressed in Sf9 insect cell line; RBA-assay for hER
162	2917	446	Mammalian	Human	ERbeta		*In vitro*	Lab		18 h		Ambient		Human ERbeta expressed in Sf9 insect cell line; RBA-assay for hER
162	2918	447	Mammalian	Human	ERalpha		*In vitro*	Lab		18 h		Ambient		Human ERalpha expressed in Sf9 insect cell line; RBA-assay for hER
162	2919	447	Mammalian	Human	ERbeta		*In vitro*	Lab		18 h		Ambient		Human ERbeta expressed in Sf9 insect cell line; RBA-assay for hER
162	2920	448	Mammalian	Human	ERalpha		*In vitro*	Lab		18 h		Ambient		Human ERalpha expressed in Sf9 insect cell line; RBA-assay for hER
162	2921	448	Mammalian	Human	ERbeta		*In vitro*	Lab		18 h		Ambient		Human ERbeta expressed in Sf9 insect cell line; RBA-assay for hER
162	2922	449	Mammalian	Human	ERalpha		*In vitro*	Lab		18 h		Ambient		Human ERalpha expressed in Sf9 insect cell line; RBA-assay for hER

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
162	2923	449	Mammalian	Human	ERbeta		*In vitro*	Lab		18 h		Ambient		Human ERbeta expressed in Sf9 insect cell line; RBA-assay for hER
162	2924	383	Mammalian	Human	293 embryonal kidney cells		*In vitro*	Lab		24 h			1000 nM	Cells transfected with human ERalpha or ERbeta expression plasmid
162	2925	413	Mammalian	Human	293 embryonal kidney cells		*In vitro*	Lab		24 h			1000 nM	Cells transfected with human ERalpha or ERbeta expression plasmid
162	2926	242	Mammalian	Human	293 embryonal kidney cells		*In vitro*	Lab		24 h			1000 nM	Cells transfected with human ERalpha or ERbeta expression plasmid
162	2927	241	Mammalian	Human	293 embryonal kidney cells		*In vitro*	Lab		24 h			1000 nM	Cells transfected with human ERalpha or ERbeta expression plasmid
162	2928	430	Mammalian	Human	293 embryonal kidney cells		*In vitro*	Lab		24 h			1000 nM	Cells transfected with human ERalpha or ERbeta expression plasmid
162	2929	431	Mammalian	Human	293 embryonal kidney cells		*In vitro*	Lab		24 h			1000 nM	Cells transfected with human ERalpha or ERbeta expression plasmid
162	2930	474	Mammalian	Human	293 embryonal kidney cells		*In vitro*	Lab		24 h			1000 nM	Cells transfected with human ERalpha or ERbeta expression plasmid
162	2931	436	Mammalian	Human	293 embryonal kidney cells		*In vitro*	Lab		24 h			1000 nM	Cells transfected with human ERalpha or ERbeta expression plasmid
162	2932	277	Mammalian	Human	293 embryonal kidney cells		*In vitro*	Lab		24 h			1000 nM	Cells transfected with human ERalpha or ERbeta expression plasmid
162	2933	425	Mammalian	Human	293 embryonal kidney cells		*In vitro*	Lab		24 h			1000 nM	Cells transfected with human ERalpha or ERbeta expression plasmid
162	2934	65	Mammalian	Human	293 embryonal kidney cells		*In vitro*	Lab		24 h			1000 nM	Cells transfected with human ERalpha or ERbeta expression plasmid
162	2935	157	Mammalian	Human	293 embryonal kidney cells		*In vitro*	Lab		24 h			1000 nM	Cells transfected with human ERalpha or ERbeta expression plasmid
162	2936	355	Mammalian	Human	293 embryonal kidney cells		*In vitro*	Lab		24 h			1000 nM	Cells transfected with human ERalpha or ERbeta expression plasmid

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
162	2937	226	Mammalian	Human	293 embryonal kidney cells		*In vitro*	Lab		24 h			1000 nM	Cells transfected with human ERalpha or ERbeta expression plasmid
162	2938	230	Mammalian	Human	293 embryonal kidney cells		*In vitro*	Lab		24 h			1000 nM	Cells transfected with human ERalpha or ERbeta expression plasmid
162	2939	426	Mammalian	Human	293 embryonal kidney cells		*In vitro*	Lab		24 h			1000 nM	Cells transfected with human ERalpha or ERbeta expression plasmid
162	2940	377	Mammalian	Human	293 embryonal kidney cells		*In vitro*	Lab		24 h			1000 nM	Cells transfected with human ERalpha or ERbeta expression plasmid
162	2941	374	Mammalian	Human	293 embryonal kidney cells		*In vitro*	Lab		24 h			1000 nM	Cells transfected with human ERalpha or ERbeta expression plasmid
162	2942	376	Mammalian	Human	293 embryonal kidney cells		*In vitro*	Lab		24 h			1000 nM	Cells transfected with human ERalpha or ERbeta expression plasmid
162	2943	444	Mammalian	Human	293 embryonal kidney cells		*In vitro*	Lab		24 h			1000 nM	Cells transfected with human ERalpha or ERbeta expression plasmid
162	2944	445	Mammalian	Human	293 embryonal kidney cells		*In vitro*	Lab		24 h			1000 nM	Cells transfected with human ERalpha or ERbeta expression plasmid
162	2945	446	Mammalian	Human	293 embryonal kidney cells		*In vitro*	Lab		24 h			1000 nM	Cells transfected with human ERalpha or ERbeta expression plasmid
162	2946	447	Mammalian	Human	293 embryonal kidney cells		*In vitro*	Lab		24 h			1000 nM	Cells transfected with human ERalpha or ERbeta expression plasmid
162	2947	448	Mammalian	Human	293 embryonal kidney cells		*In vitro*	Lab		24 h			1000 nM	Cells transfected with human ERalpha or ERbeta expression plasmid
162	2948	449	Mammalian	Human	293 embryonal kidney cells		*In vitro*	Lab		24 h			1000 nM	Cells transfected with human ERalpha or ERbeta expression plasmid
162	2949	450	Mammalian	Human	293 embryonal kidney cells		*In vitro*	Lab		24 h			1000 nM	Cells transfected with human ERalpha or ERbeta expression plasmid
162	2950	451	Mammalian	Human	293 embryonal kidney cells		*In vitro*	Lab		24 h			1000 nM	Cells transfected with human ERalpha or ERbeta expression plasmid

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
162	2951	452	Mammalian	Human	293 embryonal kidney cells		*In vitro*	Lab		24 h			1000 nM	Cells transfected with human ERalpha or ERbeta expression plasmid
162	2952	453	Mammalian	Human	293 embryonal kidney cells		*In vitro*	Lab		24 h			1000 nM	Cells transfected with human ERalpha or ERbeta expression plasmid
162	2953	454	Mammalian	Human	293 embryonal kidney cells		*In vitro*	Lab		24 h			1000 nM	Cells transfected with human ERalpha or ERbeta expression plasmid
163	2954	383	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		7 d			0.027 ng/ml - 0.027 µg/ml	1 pM - 100 nM
163	2955	380	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		7 d			0.027 ng/ml - 0.027 µg/ml	1 pM - 100 nM
163	2956	374	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		7 d			0.32 ng/ml - 0.032 µg/ml	10 pM - 100 nM
163	2957	456	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		7 d			0.1-10 µg/ml	Commercial grade: 66.2%
163	2958	455	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		7 d			1-10 µg/ml	Commercial grade: 46.5%
163	2959	457	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		7 d			0.228-2.28 µg/ml	10-100 µM; Reagent grade, N-phosphonomethyl-glycine, monoisopropylamine salt, 40 wt% solution in water
163	2960	458	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		7 d			1-10 µg/ml	Commercial grade, 0.99% glyphosate
163	2961	462	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		7 d			0.01-1 µg/ml	Commercial surfactant mixture containing alkyl polyoxyethylenes, free fatty acids, glycol and isopropanol
163	2962	459	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		7 d			0.01-1 µg/ml	Commercial surfactant mixture containing alkylarylpolyoxyethylene glycols and free fatty acids

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
163	2963	461	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		7 d			0.01-0.1 µg/ml	Commercial-grade mixture containing a proprietary surfactant containing < 0.002% ethylene and < 0.002% dioxane
163	2964	463	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		7 d			0.01-0.1 µg/ml	Commercial mixture containing petroleum hydrocarbons and mono- and diesters of omega-hydroxypolyoxyethylenealkyl polyoxyethylenes
175	3001	350	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		24 h			EC50 = 1.3 µM	Contributes to estrogenic activity of air particulate matter
175	3002	347	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		24 h			EC50 = 4 µM	Contributes to estrogenic activity of air particulate matter
175	3003	351	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		24 h			EC50 = 5.5 µM	Contributes to estrogenic activity of air particulate matter
175	3004	477	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		24 h				Component of air particulate matter
175	3005	346	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		24 h				Component of air particulate matter
175	3006	352	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		24 h				Component of air particulate matter
175	3007	349	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		24 h				Component of air particulate matter
175	3008	476	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		24 h				Component of air particulate matter
182	3037	481	Mammalian	Human			*In vitro*	Lab					Ki = 2.2 µM	[3H]H2O release assay for human aromatase in Chinese hamster ovary cells
182	3038	453	Mammalian	Human			*In vitro*	Lab					Ki = 2.6 µM	[3H]H2O release assay for human aromatase in Chinese hamster ovary cells
182	3039	448	Mammalian	Human			*In vitro*	Lab					Ki = 5.1 µM	[3H]H2O release assay for human aromatase in Chinese hamster ovary cells

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
182	3040	482	Mammalian	Human			*In vitro*	Lab					Ki = 10 µM	[3H]H2O release assay for human aromatase in Chinese hamster ovary cells
182	3041	451	Mammalian	Human			*In vitro*	Lab					Ki = 12 µM	[3H]H2O release assay for human aromatase in Chinese hamster ovary cells
182	3042	483	Mammalian	Human			*In vitro*	Lab					Ki = 95 µM	[3H]H2O release assay for human aromatase in Chinese hamster ovary cells
182	3043	376	Mammalian	Human			*In vitro*	Lab					Ki = 123 µM	[3H]H2O release assay for human aromatase in Chinese hamster ovary cells
182	3044	484	Mammalian	Human			*In vitro*	Lab					up to 50 µM	[3H]H2O release assay for human aromatase in Chinese hamster ovary cells
185	3052	468	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		24 h		37	1nM- 10 µM	
185	3053	486	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		24 h		37	1nM- 10 µM	
185	3054	487	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		24 h		37	1nM- 10 µM	
185	3055	468	Mammalian	Human	MCF-7 cells		*In vitro*	Lab					1 µM	Concentration range: 0.01-10 µM
185	3056	486	Mammalian	Human	MCF-7 cells		*In vitro*	Lab					0.1-1 µM	Concentration range: 0.01-10 µM
185	3057	487	Mammalian	Human	MCF-7 cells		*In vitro*	Lab					0.01 µM and 1-10 µM	Concentration range: 0.01-10 µM
24	3085	278	Mammalian	Human	Postpartum serum		*In vitro*	Lab					100 µM	
24	3086	488	Mammalian	Human	Postpartum serum		*In vitro*	Lab					100 µM	
24	3087	242	Mammalian	Human	Postpartum serum		*In vitro*	Lab					100 µM	
24	3088	356	Mammalian	Human	Postpartum serum		*In vitro*	Lab					100 µM	
24	3089	355	Mammalian	Human	Postpartum serum		*In vitro*	Lab					100 µM	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
24	3090	358	Mammalian	Human	Postpartum serum		*In vitro*	Lab					100 µM	
188	3097	279	Mammalian	Human	ZR-75 cells		*In vitro*	Lab		11 d		32	10 µM	
188	3098	391	Mammalian	Human	ZR-75 cells		*In vitro*	Lab		11 d		32	10 µM	
188	3099	285	Mammalian	Human	ZR-75 cells		*In vitro*	Lab		11 d		32	10 µM	
188	3100	284	Mammalian	Human	ZR-75 cells		*In vitro*	Lab		11 d		32	0.1-10 µM	
188	3102	282	Mammalian	Human	ZR-75 cells		*In vitro*	Lab		11 d		32	0.1-10 µM	
188	3103	489	Mammalian	Human	ZR-75 cells		*In vitro*	Lab		11 d		32	0.1-10 µM	
188	3104	280	Mammalian	Human	ZR-75 cells		*In vitro*	Lab		11 d		32	0.1-10 µM	
188	3105	283	Mammalian	Human	ZR-75 cells		*In vitro*	Lab		11 d		32	0.1-10 µM	
188	3106	490	Mammalian	Human	ZR-75 cells		*In vitro*	Lab		11 d		32	0.1-10 µM	
188	3115	391	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		12 d		32	10 µM	
188	3116	279	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		12 d		32	10 µM	
188	3117	285	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		12 d		32	10 µM	
188	3118	489	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		12 d		32	10 µM	
188	3119	280	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		12 d		32	10 µM	
188	3120	283	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		12 d		32	10 µM	
188	3121	284	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		12 d		32	10 µM	
188	3122	282	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		12 d		32	10 µM	
190	3131	242	Mammalian	Human	ER		*In vitro*	Lab		1 h		25	IC50 = 1 µM	
190	3132	359	Mammalian	Human	ER		*In vitro*	Lab		1 h		25	IC50 = 11 µM	
190	3133	465	Mammalian	Human	ER		*In vitro*	Lab		1 h		25	10-100 µM	
190	3134	264	Mammalian	Human	ER		*In vitro*	Lab		1 h		25	100 µM	
190	3135	497	Mammalian	Human	ER		*In vitro*	Lab		1 h		25	100 µM	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
190	3136	237	Mammalian	Human	ER		*In vitro*	Lab		1 h		25	100 µM	
190	3137	359	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		18 h			10-100 nM	
190	3138	242	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		18 h			1 µM	
190	3139	264	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		18 h			1-10 µM	
190	3140	465	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		18 h			1 µM	
190	3141	237	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		18 h			4.5 µM	
190	3142	497	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		18 h			20 µM	
190	3143	370	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		18 h			up to 20 µM	
192	3147	300	Mammalian	Human	ER		*In vitro*	Lab					pC50 = -2.447	Three-dimensional QSAR model
192	3148	297	Mammalian	Human	ER		*In vitro*	Lab					pC50 = -3.104	Three-dimensional QSAR model
192	3149	498	Mammalian	Human	ER		*In vitro*	Lab					pC50 = -3.011	Three-dimensional QSAR model
192	3150	292	Mammalian	Human	ER		*In vitro*	Lab					pC50 = -2.613	Three-dimensional QSAR model
192	3151	383	Mammalian	Human	ER		*In vitro*	Lab					pC50 = -0.415	Three-dimensional QSAR model
192	3152	499	Mammalian	Human	ER		*In vitro*	Lab					pC50 = -1.666	Three-dimensional QSAR model
192	3153	500	Mammalian	Human	ER		*In vitro*	Lab					pC50 = -2.076	Three-dimensional QSAR model
192	3154	501	Mammalian	Human	ER		*In vitro*	Lab					pC50 = -2.145	Three-dimensional QSAR model
192	3155	504	Mammalian	Human	ER		*In vitro*	Lab					pC50 = -2.646	Three-dimensional QSAR model
192	3156	505	Mammalian	Human	ER		*In vitro*	Lab					pC50 = -2.324	Three-dimensional QSAR model
192	3157	506	Mammalian	Human	ER		*In vitro*	Lab					pC50 = -3.000	Three-dimensional QSAR model
192	3158	509	Mammalian	Human	ER		*In vitro*	Lab					pC50 = -3.132	Three-dimensional QSAR model
192	3159	502	Mammalian	Human	ER		*In vitro*	Lab					pC50 = -3.415	Three-dimensional QSAR model
192	3160	503	Mammalian	Human	ER		*In vitro*	Lab					pC50 = -3.901	Three-dimensional QSAR model
192	3161	507	Mammalian	Human	ER		*In vitro*	Lab					pC50 = -3.699	Three-dimensional QSAR model

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
192	3162	426	Mammalian	Human	ER		*In vitro*	Lab					pC50 = -4.137	Three-dimensional QSAR model
192	3163	508	Mammalian	Human	ER		*In vitro*	Lab					pC50 = -3.484	Three-dimensional QSAR model
195	3181	279	Mammalian	Human	ZR-75 cells		*In vitro*	Lab		10 d			10 µM	
195	3182	285	Mammalian	Human	ZR-75 cells		*In vitro*	Lab		10 d			10 µM	
195	3183	513	Mammalian	Human	ZR-75 cells		*In vitro*	Lab		10 d			10 µM	
195	3184	279	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		24 h			1-100 µM	
195	3185	285	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		24 h			10-100 µM	
195	3186	513	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		24 h			10-100 µM	
197	3202	377	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		7 d			10pM - 1 µM	
197	3203	374	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		7 d			10pM - 1 µM	
197	3204	523	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		7 d			10pM - 1 µM	
197	3205	376	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		7 d			0.1-1 µM	Concentration range: 10pM - 1 µM
197	3206	451	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		7 d			0.1-1 µM	Concentration range: 10pM - 1 µM
197	3207	377	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		24 h			100 nM	
197	3208	374	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		24 h			100 nM	
197	3209	523	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		24 h			1 nM	
197	3215	377	Mammalian	Human	Enzyme activity		*In vitro*	Lab					0.12-1.2 µM	17-beta-estradiol oxidoreductase purified from human placenta
197	3216	374	Mammalian	Human	MCF-7 cells		*In vitro*	Lab					1.2 µM	
197	3217	377	Mammalian	Human	T-47D cells		*In vitro*	Lab					0.012-1.2 µM	
197	3218	376	Mammalian	Human	T-47D cells		*In vitro*	Lab					1.2 µM	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
200	3249	382	Mammalian	Human	ER		*In vitro*	Lab		45 min	Room temperature		IC50 = 0.67 nM	Estrogen receptor binding assay
200	3250	383	Mammalian	Human	ER		*In vitro*	Lab		45 min	Room temperature		IC50 = 0.25 nM	Estrogen receptor binding assay
200	3251	413	Mammalian	Human	ER		*In vitro*	Lab		45 min	Room temperature		IC50 = 2.6 nM	Estrogen receptor binding assay
200	3252	157	Mammalian	Human	ER		*In vitro*	Lab		45 min	Room temperature		IC50 = 0.11 µM	Estrogen receptor binding assay
200	3253	65	Mammalian	Human	ER		*In vitro*	Lab		45 min	Room temperature		IC50 = 4.3 µM	Estrogen receptor binding assay
200	3254	529	Mammalian	Human	ER		*In vitro*	Lab		45 min	Room temperature		IC50 = 4 µM	Estrogen receptor binding assay
200	3255	530	Mammalian	Human	ER		*In vitro*	Lab		45 min	Room temperature		IC50 = 57 µM	Estrogen receptor binding assay
200	3256	279	Mammalian	Human	ER		*In vitro*	Lab		45 min	Room temperature		IC50 = 12 µM	Estrogen receptor binding assay
200	3257	242	Mammalian	Human	ER		*In vitro*	Lab		45 min	Room temperature		IC50 = 0.5 µM	Estrogen receptor binding assay
200	3258	358	Mammalian	Human	ER		*In vitro*	Lab		45 min	Room temperature		IC50 = 16 µM	Estrogen receptor binding assay
200	3259	226	Mammalian	Human	ER		*In vitro*	Lab		45 min	Room temperature		IC50 = 13 µM	Estrogen receptor binding assay
200	3260	531	Mammalian	Human	ER		*In vitro*	Lab		45 min	Room temperature		IC50 = 56 µM	Estrogen receptor binding assay
200	3269	532	Mammalian	Human	ER		*In vitro*	Lab		45 min	Room temperature		IC50 = 3.6 nM	Estrogen receptor binding assay
200	3293	157	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			0.5-10 µM	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
200	3294	528	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			0.5-10 µM	
200	3295	279	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			5-100 µM	
200	3296	242	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			0.5-10 µM	
200	3297	531	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			1-100 µM	
200	3298	529	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			5-50 µM	
200	3299	65	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			5-10 µM	
200	3300	358	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			10-100 µM	
200	3301	226	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			5-50 µM	
200	3302	355	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			5-10 µM	
200	3303	285	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			50-100 µM	
200	3304	382	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			10 fM - 50 µM	
200	3305	383	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			0.1 nM - 100 µM	
200	3306	382	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		48 h			1.11 µM	
200	3307	383	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		48 h			0.63 µM	
200	3308	157	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		48 h			10 µM	
200	3309	528	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		48 h			10 µM	
200	3310	529	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		48 h			2.5 µM	
200	3311	65	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		48 h			2.5 µM	
200	3312	279	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		48 h			5 µM	
200	3313	285	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		48 h			10 µM	
200	3314	355	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		48 h			2.5 µM	
200	3315	242	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		48 h			2.5 µM	
200	3316	358	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		48 h			10 µM	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
200	3317	531	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		48 h			2.5 µM	
204	3326	227	Mammalian	Human	HepG2 cells		*In vitro*	Lab					1-10 µM	HepG2 cells transfcted with 2 overlapping EREs
204	3327	227	Mammalian	Human	HepG2 cells		*In vitro*	Lab					10 µM	
204	3328	236	Mammalian	Human	HepG2 cells		*In vitro*	Lab					1-10 µM	HepG2 cells transfcted with 2 overlapping EREs
204	3329	236	Mammalian	Human	HepG2 cells		*In vitro*	Lab					10 µM	
204	3330	225	Mammalian	Human	HepG2 cells		*In vitro*	Lab					1-10 µM	HepG2 cells transfcted with 2 overlapping EREs
204	3331	225	Mammalian	Human	HepG2 cells		*In vitro*	Lab					10 µM	
204	3332	534	Mammalian	Human	HepG2 cells		*In vitro*	Lab					1-100 µM	HepG2 cells transfcted with 2 overlapping EREs
204	3333	535	Mammalian	Human	HepG2 cells		*In vitro*	Lab					10-100 µM	HepG2 cells transfcted with 2 overlapping EREs
204	3334	536	Mammalian	Human	HepG2 cells		*In vitro*	Lab					LOEC = 1 µM	HepG2 cells transfcted with 2 overlapping EREs
204	3335	240	Mammalian	Human	HepG2 cells		*In vitro*	Lab					LOEC = 1 µM	HepG2 cells transfcted with 2 overlapping EREs
205	3336	214	Mammalian	Human		20-45 y	*In vivo*	Field		> 2 y	Occupational			Long-term average blood Pb concentration < 400 µg/l
205	3337	323	Mammalian	Human		20-45 y	*In vivo*	Field		> 2 y	Environmental contamination			Long-term average blood Cd concentration < 10 µg/l
205	3338	362	Mammalian	Human		20-45 y	*In vivo*	Field		> 2 y	Environmental contamination			(Positive) correlation between serum Zn concentration and reproductive parameters
205	3339	524	Mammalian	Human		20-45 y	*In vivo*	Field		> 2 y	Environmental contamination			Correlation between serum Cu concentration and reproductive parameters
206	3340	242	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		1 h		37	0.1 mM	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
206	3341	154	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		1 h		37	IC50 = 0.1 µM	
206	3342	537	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		1 h		37	IC50 = 0.1 µM	
206	3348	242	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		12 h			0.1 nM - 10 µM	
206	3349	154	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		12 h			0.01-10 µM	Concentration range: 0.1 nM - 10 µM
206	3350	537	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		12 h			0.01-10 µM	Concentration range: 0.1 nM - 10 µM
206	3351	278	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		12 h			1-10 µM	Concentration range: 0.1- 10 µM
208	3353	545	Mammalian	Human	GR		*In vitro*	Lab		Overnight		4 (on ice)	IC50 = 1 µM	Competition binding study with GR
208	3354	546	Mammalian	Human	GR		*In vitro*	Lab		Overnight		4 (on ice)	IC50 = 10 µM	Competition binding study with GR
208	3355	547	Mammalian	Human	GR		*In vitro*	Lab		Overnight		4 (on ice)	1 nM - 30 µM	Competition binding study with GR
208	3356	545	Mammalian	Human	GRAF cells		*In vitro*	Lab		48 h			IC50 = 2.7 µM	GRAFF reporter cell line: transformation ofChinese hamster ovary cells with the mammalian expression vector pmT-hGR and the glucocorticoid responsive reporter vector MMTV-ALP
208	3357	547	Mammalian	Human	GRAF cells		*In vitro*	Lab		48 h			10 µM	Concentration range: 1 nM - 25 µM; GRAFF reporter cell line: transformation ofChinese hamster ovary cells with the mammalian expression vector pmT-hGR and the glucocorticoid responsive reporter vector MMTV-ALP

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
208	3358	546	Mammalian	Human	GRAF cells		*In vitro*	Lab		48 h			1 nM - 10 µM	GRAFF reporter cell line: transformation ofChinese hamster ovary cells with the mammalian expression vector pmT-hGR and the glucocorticoid responsive reporter vector MMTV-ALP
26	3376	242	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			10 µM	E-screen
211	3377	524	Mammalian	Human		Neonate	*In vivo*	Field			Environmental concentration			Mean placental Cu concentration 4.41 and 4.9 µg/g for smokers and nonsmokers, respectively
211	3378	362	Mammalian	Human		Neonate	*In vivo*	Field			Environmental concentration			Mean placental Zn concentration 72.9 and 66.1 µg/g for smokers and nonsmokers, respectively
216	3390	380	Mammalian	Human	ERalpha		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
216	3392	379	Mammalian	Human	ERalpha		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
216	3394	378	Mammalian	Human	ERalpha		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
216	3396	553	Mammalian	Human	ERalpha		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
216	3398	554	Mammalian	Human	ERalpha		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
216	3400	555	Mammalian	Human	ERalpha		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
216	3402	556	Mammalian	Human	ERalpha		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
216	3404	557	Mammalian	Human	ERalpha		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
216	3406	413	Mammalian	Human	ERalpha		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
216	3408	423	Mammalian	Human	ERalpha		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
216	3410	558	Mammalian	Human	ERalpha		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
216	3412	377	Mammalian	Human	ERalpha		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
216	3414	376	Mammalian	Human	ERalpha		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
216	3416	523	Mammalian	Human	ERalpha		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
216	3418	559	Mammalian	Human	ERalpha		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
216	3420	157	Mammalian	Human	ERalpha		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
216	3422	355	Mammalian	Human	ERalpha		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
217	3424	157	Mammalian	Human	ERalpha		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
217	3425	157	Mammalian	Human	ERbeta		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
217	3426	523	Mammalian	Human	ERalpha		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
217	3427	523	Mammalian	Human	ERbeta		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
217	3428	377	Mammalian	Human	ERalpha		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
217	3429	377	Mammalian	Human	ERbeta		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
217	3430	376	Mammalian	Human	ERalpha		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
217	3431	376	Mammalian	Human	ERbeta		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
217	3432	355	Mammalian	Human	ERalpha		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
217	3433	355	Mammalian	Human	ERbeta		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
217	3434	559	Mammalian	Human	ERalpha		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
217	3435	559	Mammalian	Human	ERbeta		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
217	3436	553	Mammalian	Human	ERalpha		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
217	3437	553	Mammalian	Human	ERbeta		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
217	3438	554	Mammalian	Human	ERalpha		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
217	3439	554	Mammalian	Human	ERbeta		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
217	3440	381	Mammalian	Human	ERalpha		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
217	3441	381	Mammalian	Human	ERbeta		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
217	3442	380	Mammalian	Human	ERalpha		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
217	3443	380	Mammalian	Human	ERbeta		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
217	3444	379	Mammalian	Human	ERalpha		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
217	3445	379	Mammalian	Human	ERbeta		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
217	3446	378	Mammalian	Human	ERalpha		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
217	3447	378	Mammalian	Human	ERbeta		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
217	3448	555	Mammalian	Human	ERalpha		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
217	3449	555	Mammalian	Human	ERbeta		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
217	3450	423	Mammalian	Human	ERalpha		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
217	3451	423	Mammalian	Human	ERbeta		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
217	3452	558	Mammalian	Human	ERalpha		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
217	3453	558	Mammalian	Human	ERbeta		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
217	3454	383	Mammalian	Human	ERalpha		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
217	3455	383	Mammalian	Human	ERbeta		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
217	3456	557	Mammalian	Human	ERalpha		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
217	3457	557	Mammalian	Human	ERbeta		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
217	3458	556	Mammalian	Human	ERalpha		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
217	3459	556	Mammalian	Human	ERbeta		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
217	3460	413	Mammalian	Human	ERalpha		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
217	3461	413	Mammalian	Human	ERbeta		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
218	3462	523	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		24 h			1 pM - 10 nM	
218	3463	383	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		24 h			1 pM - 10 nM	
218	3464	65	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		24 h			0.01-10 µM	
218	3465	376	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		24 h			0.01-10 µM	
218	3466	415	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		24 h			1-10 µM	
218	3467	355	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		24 h			1-100 µM	
218	3468	226	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		24 h			1-100 µM	
218	3469	285	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		24 h			1-1000 µM	
221	3488	560	Mammalian	Human		7-10 y	*In vivo*	Field			Environmental contamination		Mean: 0.03 µg/l blood	
221	3489	561	Mammalian	Human		7-10 y	*In vivo*	Field			Environmental contamination		Mean: 0.13 µg/l blood	
221	3490	292	Mammalian	Human		7-10 y	*In vivo*	Field			Environmental contamination		Mean: 0.17 µg/l blood	
221	3491	562	Mammalian	Human		7-10 y	*In vivo*	Field			Environmental contamination		Mean: 0.08 µg/l blood	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
221	3492	563	Mammalian	Human		7-10 y	*In vivo*	Field			Environmental contamination		Mean: 0.02 µg/l blood	
221	3493	564	Mammalian	Human		7-10 y	*In vivo*	Field			Environmental contamination		Mean: 0.02 µg/l blood	
221	3494	323	Mammalian	Human		7-10 y	*In vivo*	Field			Environmental contamination		Mean: 0.18 µg/l blood	
221	3495	214	Mammalian	Human		7-10 y	*In vivo*	Field			Environmental contamination		Mean: 26.8 µg/l blood	
221	3496	325	Mammalian	Human		7-10 y	*In vivo*	Field			Environmental contamination		Mean: 0.15 µg/l 24-hr urine	
223	3499	565	Mammalian	Human	Placental microsomes	Adult	*In vitro*	Lab		15 min.		37	IC50 = 0.04 µM	Classical [3H]H2O method
223	3500	239	Mammalian	Human	Placental microsomes	Adult	*In vitro*	Lab		15 min.		37	IC50 = 0.34 µM	Classical [3H]H2O method
223	3501	566	Mammalian	Human	Placental microsomes	Adult	*In vitro*	Lab		15 min.		37	IC50 = 6.5 µM	Classical [3H]H2O method
223	3502	567	Mammalian	Human	Placental microsomes	Adult	*In vitro*	Lab		15 min.		37	IC50 = 10 µM	Classical [3H]H2O method
223	3503	568	Mammalian	Human	Placental microsomes	Adult	*In vitro*	Lab		15 min.		37	IC50 = 21 µM	Classical [3H]H2O method
223	3504	262	Mammalian	Human	Placental microsomes	Adult	*In vitro*	Lab		15 min.		37	IC50 = 32 µM	Classical [3H]H2O method

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
223	3505	567	Mammalian	Human	JEG-3 choriocarcinoma cells	Adult	*In vitro*	Lab		1 h		37	IC50 = 2 µM	Classical [3H]H2O method; intact cell system
223	3506	243	Mammalian	Human	Placental microsomes	Adult	*In vitro*	Lab		15 min.		37	IC50 > 50 µM	Classical [3H]H2O method
223	3507	569	Mammalian	Human	Placental microsomes	Adult	*In vitro*	Lab		15 min.		37	50 µM	Classical [3H]H2O method
223	3508	405	Mammalian	Human	Placental microsomes	Adult	*In vitro*	Lab		15 min.		37	50 µM	Classical [3H]H2O method
223	3509	570	Mammalian	Human	Placental microsomes	Adult	*In vitro*	Lab		15 min.		37	50 µM	Classical [3H]H2O method
223	3510	353	Mammalian	Human	Placental microsomes	Adult	*In vitro*	Lab		15 min.		37	50 µM	Classical [3H]H2O method
223	3511	251	Mammalian	Human	Placental microsomes	Adult	*In vitro*	Lab		15 min.		37	50 µM	Classical [3H]H2O method
223	3512	266	Mammalian	Human	Placental microsomes	Adult	*In vitro*	Lab		15 min.		37	50 µM	Classical [3H]H2O method
223	3513	244	Mammalian	Human	Placental microsomes	Adult	*In vitro*	Lab		15 min.		37	50 µM	Classical [3H]H2O method

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
223	3514	252	Mammalian	Human	Placental microsomes	Adult	*In vitro*	Lab		15 min.		37	50 µM	Classical [3H]H2O method
223	3515	356	Mammalian	Human	Placental microsomes	Adult	*In vitro*	Lab		15 min.		37	50 µM	Classical [3H]H2O method
223	3516	571	Mammalian	Human	Placental microsomes	Adult	*In vitro*	Lab		15 min.		37	50 µM	Classical [3H]H2O method
223	3517	572	Mammalian	Human	Placental microsomes	Adult	*In vitro*	Lab		15 min.		37	50 µM	Classical [3H]H2O method
223	3518	573	Mammalian	Human	Placental microsomes	Adult	*In vitro*	Lab		15 min.		37	50 µM	Classical [3H]H2O method
223	3519	407	Mammalian	Human	Placental microsomes	Adult	*In vitro*	Lab		15 min.		37	50 µM	Classical [3H]H2O method
223	3520	574	Mammalian	Human	Placental microsomes	Adult	*In vitro*	Lab		15 min.		37	50 µM	Classical [3H]H2O method
226	3525	378	Mammalian	Human	ERalpha		*In vitro*	Lab		1 h	Room temperature		IC50 = 626 nM	Fluorescence polarization method to measure ER binding
226	3526	383	Mammalian	Human	ERalpha		*In vitro*	Lab		1 h	Room temperature		IC50 = 11 nM	Fluorescence polarization method to measure ER binding
226	3527	413	Mammalian	Human	ERalpha		*In vitro*	Lab		1 h	Room temperature		IC50 = 423 nM	Fluorescence polarization method to measure ER binding
226	3528	241	Mammalian	Human	ERalpha		*In vitro*	Lab		1 h	Room temperature		IC50 = 14-50 µM	Fluorescence polarization method to measure ER binding

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
226	3529	242	Mammalian	Human	ERalpha		*In vitro*	Lab		1 h	Room temperature		IC50 = 2.7 µM	Fluorescence polarization method to measure ER binding
226	3530	355	Mammalian	Human	ERalpha		*In vitro*	Lab		1 h	Room temperature		IC50 = 81-193 µM	Fluorescence polarization method to measure ER binding
226	3531	354	Mammalian	Human	ERalpha		*In vitro*	Lab		1 h	Room temperature		IC50 = 750 nM	Fluorescence polarization method to measure ER binding
226	3532	230	Mammalian	Human	ERalpha		*In vitro*	Lab		1 h	Room temperature		IC50 = 5.7 µM	Fluorescence polarization method to measure ER binding
226	3533	225	Mammalian	Human	ERalpha		*In vitro*	Lab		1 h	Room temperature		IC50 = 470-4500 µM	Fluorescence polarization method to measure ER binding
226	3534	157	Mammalian	Human	ERalpha		*In vitro*	Lab		1 h	Room temperature		IC50 = 32 µM	Fluorescence polarization method to measure ER binding
226	3535	277	Mammalian	Human	ERalpha		*In vitro*	Lab		1 h	Room temperature		IC50 = 7.5 µM	Fluorescence polarization method to measure ER binding
226	3536	65	Mammalian	Human	ERalpha		*In vitro*	Lab		1 h	Room temperature		IC50 = 3.9 µM	Fluorescence polarization method to measure ER binding
226	3537	279	Mammalian	Human	ERalpha		*In vitro*	Lab		1 h	Room temperature		IC50 = 73-120 µM	Fluorescence polarization method to measure ER binding
231	3550	579	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			10 nM - 10 µM	E-screen
231	3551	157	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			10 nM - 10 µM	E-screen
231	3552	528	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			10 nM - 10 µM	E-screen
231	3553	580	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			0.1-10 µM	E-screen; concentration range: 10 nM - 10 µM
231	3554	581	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			10 µM	E-screen; concentration range: 10 nM - 10 µM
231	3555	591	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			10 µM	E-screen; concentration range: 10 nM - 10 µM

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
231	3556	582	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			10 nM - 10 µM	E-screen
231	3557	583	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			10 nM - 10 µM	E-screen
231	3558	584	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			10 nM - 10 µM	E-screen
231	3559	585	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			10 nM - 10 µM	E-screen
231	3560	586	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			10 nM - 10 µM	E-screen
231	3561	587	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			10 nM - 10 µM	E-screen
231	3562	588	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			10 nM - 10 µM	E-screen
231	3563	589	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			1-10 µM	E-screen; concentration range: 10 nM - 10 µM
231	3564	590	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			10 nM - 10 µM	E-screen
231	3565	579	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		72 h			1-10 µM	Concentration range: 0.1-10 µM
231	3566	157	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		72 h			0.1-10 µM	
231	3567	528	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		72 h			1-10 µM	Concentration range: 0.1-10 µM
231	3568	580	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		72 h			0.1-10 µM	
231	3569	581	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		72 h			10 µM	Concentration range: 0.1-10 µM
231	3570	582	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		72 h			1-10 µM	Concentration range: 0.1-10 µM
231	3571	583	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		72 h			0.1-10 µM	
231	3572	584	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		72 h			1-10 µM	Concentration range: 0.1-10 µM
231	3573	585	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		72 h			0.1-10 µM	
231	3574	586	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		72 h			0.1-10 µM	
231	3575	587	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		72 h			0.1-10 µM	
231	3576	588	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		72 h			0.1-10 µM	
231	3577	579	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			10 µM	Concentration range: 0.1-10 µM

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
231	3578	157	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			0.1-10 µM	
231	3579	528	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			1-10 µM	Concentration range: 0.1-10 µM
231	3580	580	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			10 µM	Concentration range: 0.1-10 µM
231	3581	581	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			0.1-10 µM	
231	3582	582	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			1-10 µM	Concentration range: 0.1-10 µM
231	3583	583	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			1-10 µM	Concentration range: 0.1-10 µM
231	3584	584	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			0.1-10 µM	
231	3585	585	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			0.1-10 µM	
231	3586	586	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			0.1-10 µM	
231	3587	587	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			0.1-10 µM	
231	3588	588	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			1-10 µM	Concentration range: 0.1-10 µM
231	3589	589	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			10 µM	Concentration range: 0.1-10 µM
231	3590	590	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			1-10 µM	Concentration range: 0.1-10 µM
231	3605	592	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			10 nM - 10 µM	E-screen
231	3606	593	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			10 nM - 10 µM	E-screen
231	3607	594	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			10 nM - 10 µM	E-screen
231	3608	592	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		72 h			0.1-10 µM	
231	3609	593	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		72 h			0.1-10 µM	
231	3610	594	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		72 h			0.1-10 µM	
231	3611	591	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		72 h			0.1-10 µM	
231	3612	592	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			0.1-10 µM	
231	3613	593	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			0.1-10 µM	
231	3614	594	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			0.1-10 µM	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
231	3615	591	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		6 d			0.1-10 µM	
234	3642	596	Mammalian	Human	TRbeta		*In vitro*	Lab					Ki = 90.3 µM	Sf9 insect cells transfected with human Trbeta
234	3643	598	Mammalian	Human	TRbeta		*In vitro*	Lab					Ki = 83.5 µM	Sf9 insect cells transfected with human Trbeta
234	3644	436	Mammalian	Human	TRbeta		*In vitro*	Lab					Ki = 37.7 µM	Sf9 insect cells transfected with human Trbeta
234	3645	434	Mammalian	Human	TRbeta		*In vitro*	Lab					Ki = 43 µM	Sf9 insect cells transfected with human Trbeta
234	3646	431	Mammalian	Human	TRbeta		*In vitro*	Lab					Ki = 67.2 µM	Sf9 insect cells transfected with human Trbeta
234	3647	597	Mammalian	Human	TRbeta		*In vitro*	Lab					Ki = 36.5 µM	Sf9 insect cells transfected with human Trbeta
234	3648	509	Mammalian	Human	TRbeta		*In vitro*	Lab					Ki = 33.7 µM	Sf9 insect cells transfected with human Trbeta
234	3649	300	Mammalian	Human	TRbeta		*In vitro*	Lab					Ki > 100 µM	Sf9 insect cells transfected with human Trbeta
234	3650	470	Mammalian	Human	TRbeta		*In vitro*	Lab					Ki > 100 µM	Sf9 insect cells transfected with human Trbeta
234	3651	358	Mammalian	Human	TRbeta		*In vitro*	Lab					Ki > 100 µM	Sf9 insect cells transfected with human Trbeta
234	3652	241	Mammalian	Human	TRbeta		*In vitro*	Lab					Ki > 100 µM	Sf9 insect cells transfected with human Trbeta
234	3653	263	Mammalian	Human	TRbeta		*In vitro*	Lab					Ki > 100 µM	Sf9 insect cells transfected with human Trbeta
234	3654	600	Mammalian	Human	TRbeta		*In vitro*	Lab					Ki > 100 µM	Sf9 insect cells transfected with human Trbeta

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
234	3655	242	Mammalian	Human	TRbeta		*In vitro*	Lab					Ki > 100 µM	Sf9 insect cells transfected with human Trbeta
234	3656	465	Mammalian	Human	TRbeta		*In vitro*	Lab					Ki > 100 µM	Sf9 insect cells transfected with human Trbeta
234	3657	599	Mammalian	Human	TRbeta		*In vitro*	Lab					Ki > 100 µM	Sf9 insect cells transfected with human Trbeta
234	3658	264	Mammalian	Human	TRbeta		*In vitro*	Lab					Ki > 100 µM	Sf9 insect cells transfected with human Trbeta
234	3659	596	Mammalian	Human			*In vitro*	Lab					Ki > 100 µM	Transthyretin binding assay
234	3660	598	Mammalian	Human			*In vitro*	Lab					Ki = 0.016 µM	Transthyretin binding assay
234	3661	436	Mammalian	Human			*In vitro*	Lab					Ki = 0.089 µM	Transthyretin binding assay
234	3662	434	Mammalian	Human			*In vitro*	Lab					Ki = 0.033 µM	Transthyretin binding assay
234	3663	431	Mammalian	Human			*In vitro*	Lab					Ki = 0.141 µM	Transthyretin binding assay
234	3664	597	Mammalian	Human			*In vitro*	Lab					Ki = 0.04 µM	Transthyretin binding assay
234	3665	509	Mammalian	Human			*In vitro*	Lab					Ki = 0.011 µM	Transthyretin binding assay
234	3666	300	Mammalian	Human			*In vitro*	Lab					Ki > 100 µM	Transthyretin binding assay
234	3667	242	Mammalian	Human			*In vitro*	Lab					Ki > 100 µM	Transthyretin binding assay
234	3668	465	Mammalian	Human			*In vitro*	Lab					Ki > 100 µM	Transthyretin binding assay
234	3669	358	Mammalian	Human			*In vitro*	Lab					Ki > 100 µM	Transthyretin binding assay
234	3670	241	Mammalian	Human			*In vitro*	Lab					Ki > 100 µM	Transthyretin binding assay
234	3671	263	Mammalian	Human			*In vitro*	Lab					Ki > 100 µM	Transthyretin binding assay
234	3672	264	Mammalian	Human			*In vitro*	Lab					Ki > 100 µM	Transthyretin binding assay
234	3673	600	Mammalian	Human			*In vitro*	Lab					Ki > 100 µM	Transthyretin binding assay
234	3674	470	Mammalian	Human			*In vitro*	Lab					Ki = 140 µM	Transthyretin binding assay

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
234	3675	599	Mammalian	Human			*In vitro*	Lab					Ki = 89 µM	Transthyretin binding assay
234	3676	596	Mammalian	Human			*In vitro*	Lab					Ki = 5.46 µM	Thyroid-binding protein binding assay
234	3677	434	Mammalian	Human			*In vitro*	Lab					Ki = 2.34 µM	Thyroid-binding protein binding assay
234	3678	465	Mammalian	Human			*In vitro*	Lab					Ki = 4.99 µM	Thyroid-binding protein binding assay
234	3679	599	Mammalian	Human			*In vitro*	Lab					Ki = 62.2 µM	Thyroid-binding protein binding assay
234	3680	598	Mammalian	Human			*In vitro*	Lab					Ki > 100 µM	Thyroid-binding protein binding assay
234	3681	436	Mammalian	Human			*In vitro*	Lab					Ki > 100 µM	Thyroid-binding protein binding assay
234	3682	431	Mammalian	Human			*In vitro*	Lab					Ki > 100 µM	Thyroid-binding protein binding assay
234	3683	597	Mammalian	Human			*In vitro*	Lab					Ki > 100 µM	Thyroid-binding protein binding assay
234	3684	509	Mammalian	Human			*In vitro*	Lab					Ki > 100 µM	Thyroid-binding protein binding assay
234	3685	300	Mammalian	Human			*In vitro*	Lab					Ki > 100 µM	Thyroid-binding protein binding assay
234	3686	470	Mammalian	Human			*In vitro*	Lab					Ki > 100 µM	Thyroid-binding protein binding assay
234	3687	242	Mammalian	Human			*In vitro*	Lab					Ki > 100 µM	Thyroid-binding protein binding assay
234	3688	358	Mammalian	Human			*In vitro*	Lab					Ki > 100 µM	Thyroid-binding protein binding assay
234	3689	241	Mammalian	Human			*In vitro*	Lab					Ki > 100 µM	Thyroid-binding protein binding assay
234	3690	263	Mammalian	Human			*In vitro*	Lab					Ki > 100 µM	Thyroid-binding protein binding assay
234	3691	264	Mammalian	Human			*In vitro*	Lab					Ki > 100 µM	Thyroid-binding protein binding assay
234	3692	600	Mammalian	Human			*In vitro*	Lab					Ki > 100 µM	Thyroid-binding protein binding assay
238	3720	157	Mammalian	Human	ERalpha		*In vitro*	Lab		24 h			1-1000 nM	HeLa cells transfected with hERalpha
238	3721	157	Mammalian	Human	ERbeta		*In vitro*	Lab		24 h			1-1000 nM	HeLa cells transfected with hERbeta
253	3782	607	Mammalian	Human	HepG2 hepatoma cells		*In vitro*	Lab					0.01-50 µM	Androgen receptor assay
253	3783	595	Mammalian	Human	HepG2 hepatoma cells		*In vitro*	Lab					0.01-100 µM	Androgen receptor assay
253	3784	242	Mammalian	Human	HepG2 hepatoma cells		*In vitro*	Lab					0.01-10 µM	Androgen receptor assay

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
253	3785	241	Mammalian	Human	HepG2 hepatoma cells		*In vitro*	Lab					0.01-10 µM	Androgen receptor assay
253	3786	415	Mammalian	Human	HepG2 hepatoma cells		*In vitro*	Lab					0.01-10 µM	Androgen receptor assay
253	3787	358	Mammalian	Human	HepG2 hepatoma cells		*In vitro*	Lab					0.01-10 µM	Androgen receptor assay
253	3788	465	Mammalian	Human	HepG2 hepatoma cells		*In vitro*	Lab					0.01-10 µM	Androgen receptor assay
253	3789	359	Mammalian	Human	HepG2 hepatoma cells		*In vitro*	Lab					0.01-10 µM	Androgen receptor assay
253	3790	355	Mammalian	Human	HepG2 hepatoma cells		*In vitro*	Lab					0.01-10 µM	Androgen receptor assay
253	3791	354	Mammalian	Human	HepG2 hepatoma cells		*In vitro*	Lab					0.01-10 µM	Androgen receptor assay
254	3792	157	Mammalian	Human	ERalpha		*In vitro*	Lab		24 h			EC50 = 218 nM	Human HepG2 hepatoma cells transfected with Eralpha
267	3869	223	Mammalian	Human	Uterus		*In vitro*	Lab		24 h		5	100 µM	
267	3870	223	Mammalian	Human	Prostate		*In vitro*	Lab		24 h		5	100 µM	
267	3871	225	Mammalian	Human	Uterus		*In vitro*	Lab		24 h		5	100 µM	
267	3872	225	Mammalian	Human	Prostate		*In vitro*	Lab		24 h		5	100 µM	
267	3873	226	Mammalian	Human	Uterus		*In vitro*	Lab		24 h		5	100 µM	Mixture of alpha and beta isomer
267	3874	226	Mammalian	Human	Prostate		*In vitro*	Lab		24 h		5	100 µM	Mixture of alpha and beta isomer
267	3875	227	Mammalian	Human	Uterus		*In vitro*	Lab		24 h		5	100 µM	
267	3876	227	Mammalian	Human	Prostate		*In vitro*	Lab		24 h		5	100 µM	
267	3877	228	Mammalian	Human	Uterus		*In vitro*	Lab		24 h		5	100 µM	
267	3878	228	Mammalian	Human	Prostate		*In vitro*	Lab		24 h		5	100 µM	
267	3879	236	Mammalian	Human	Uterus		*In vitro*	Lab		24 h		5	100 µM	
267	3880	236	Mammalian	Human	Prostate		*In vitro*	Lab		24 h		5	100 µM	
267	3881	282	Mammalian	Human	Uterus		*In vitro*	Lab		24 h		5	100 µM	
267	3882	282	Mammalian	Human	Prostate		*In vitro*	Lab		24 h		5	100 µM	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
267	3883	280	Mammalian	Human	Uterus		*In vitro*	Lab		24 h		5	10 µM	
267	3884	280	Mammalian	Human	Prostate		*In vitro*	Lab		24 h		5	10 µM	
267	3885	391	Mammalian	Human	Uterus		*In vitro*	Lab		24 h		5	100 µM	
267	3886	391	Mammalian	Human	Prostate		*In vitro*	Lab		24 h		5	100 µM	
267	3887	285	Mammalian	Human	Uterus		*In vitro*	Lab		24 h		5	100 µM	
267	3888	285	Mammalian	Human	Prostate		*In vitro*	Lab		24 h		5	100 µM	
267	3889	633	Mammalian	Human	Uterus		*In vitro*	Lab		24 h		5	10 µM	
267	3890	633	Mammalian	Human	Prostate		*In vitro*	Lab		24 h		5	10 µM	
267	3891	634	Mammalian	Human	Uterus		*In vitro*	Lab		24 h		5	10 µM	
267	3892	634	Mammalian	Human	Prostate		*In vitro*	Lab		24 h		5	10 µM	
267	3893	630	Mammalian	Human	Uterus		*In vitro*	Lab		24 h		5	10 µM	
267	3894	630	Mammalian	Human	Prostate		*In vitro*	Lab		24 h		5	10 µM	
267	3895	635	Mammalian	Human	Uterus		*In vitro*	Lab		24 h		5	10 µM	
267	3896	635	Mammalian	Human	Prostate		*In vitro*	Lab		24 h		5	10 µM	
267	3897	636	Mammalian	Human	Uterus		*In vitro*	Lab		24 h		5	10 µM	
267	3898	636	Mammalian	Human	Prostate		*In vitro*	Lab		24 h		5	10 µM	
267	3899	631	Mammalian	Human	Uterus		*In vitro*	Lab		24 h		5	10 µM	
267	3900	631	Mammalian	Human	Prostate		*In vitro*	Lab		24 h		5	10 µM	
267	3901	632	Mammalian	Human	Uterus		*In vitro*	Lab		24 h		5	10 µM	
267	3902	632	Mammalian	Human	Prostate		*In vitro*	Lab		24 h		5	10 µM	
267	3903	445	Mammalian	Human	Uterus		*In vitro*	Lab		24 h		5	10 µM	
267	3904	445	Mammalian	Human	Prostate		*In vitro*	Lab		24 h		5	10 µM	
267	3905	376	Mammalian	Human	Uterus		*In vitro*	Lab		24 h		5	10 µM	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
267	3906	376	Mammalian	Human	Prostate		*In vitro*	Lab		24 h		5	10 µM	
267	3907	637	Mammalian	Human	Uterus		*In vitro*	Lab		24 h		5	10 µM	
267	3908	637	Mammalian	Human	Prostate		*In vitro*	Lab		24 h		5	10 µM	
267	3909	638	Mammalian	Human	Uterus		*In vitro*	Lab		24 h		5	10 µM	
267	3910	638	Mammalian	Human	Prostate		*In vitro*	Lab		24 h		5	10 µM	
267	3911	446	Mammalian	Human	Uterus		*In vitro*	Lab		24 h		5	10 µM	
267	3912	446	Mammalian	Human	Prostate		*In vitro*	Lab		24 h		5	10 µM	
267	3913	639	Mammalian	Human	Uterus		*In vitro*	Lab		24 h		5	10 µM	
267	3914	639	Mammalian	Human	Prostate		*In vitro*	Lab		24 h		5	10 µM	
267	3915	448	Mammalian	Human	Uterus		*In vitro*	Lab		24 h		5	10 µM	
267	3916	448	Mammalian	Human	Prostate		*In vitro*	Lab		24 h		5	10 µM	
267	3917	640	Mammalian	Human	Uterus		*In vitro*	Lab		24 h		5	10 µM	
267	3918	640	Mammalian	Human	Prostate		*In vitro*	Lab		24 h		5	10 µM	
267	3919	374	Mammalian	Human	Uterus		*In vitro*	Lab		24 h		5	10 µM	
267	3920	374	Mammalian	Human	Prostate		*In vitro*	Lab		24 h		5	10 µM	
267	3921	65	Mammalian	Human	Uterus		*In vitro*	Lab		24 h		5	10 µM	
267	3922	65	Mammalian	Human	Prostate		*In vitro*	Lab		24 h		5	10 µM	
267	3923	425	Mammalian	Human	Uterus		*In vitro*	Lab		24 h		5	10 µM	
267	3924	425	Mammalian	Human	Prostate		*In vitro*	Lab		24 h		5	10 µM	
289	4016	648	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		14 d		37	EC50 = 2 µM	MCF-7 focus assay
289	4017	649	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		14 d		37	EC50 = 0.3 µM	MCF-7 focus assay
289	4018	651	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		14 d		37	0.5-5 µM	MCF-7 focus assay; dose range: 0.5 nM - 5 µM

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
289	4019	650	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		14 d		37	0.5-5 µM	MCF-7 focus assay; dose range: 0.5 nM - 5 µM
289	4020	652	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		14 d		37	0.5 nM -5 µM	MCF-7 focus assay
289	4021	313	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		14 d		37	10 nM	MCF-7 focus assay
289	4023	648	Mammalian	Human	rhER		*In vitro*	Lab		4 h		Room temperature	0.01-100 µM	Competitive ER binding assay
289	4024	649	Mammalian	Human	rhER		*In vitro*	Lab		4 h		Room temperature	IC50 = 0.5 µM	Competitive ER binding assay
307	4183	675	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		24 h		37	0.5-22 mg/l	
307	4186	675	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		24 h		37	1-22 mg/l	Dose range: 0.01-22 mg/l
309	4189	567	Mammalian	Human	MCF-7 cells (E3 clone)		*In vitro*	Lab		9 d		37	EC50 = 3 µM	MCF-7 cell proliferation assay
309	4190	262	Mammalian	Human	MCF-7 cells (E3 clone)		*In vitro*	Lab		9 d		37	10 µM	MCF-7 cell proliferation assay
309	4191	568	Mammalian	Human	MCF-7 cells (E3 clone)		*In vitro*	Lab		9 d		37	10 µM	MCF-7 cell proliferation assay
309	4192	353	Mammalian	Human	MCF-7 cells (E3 clone)		*In vitro*	Lab		9 d		37	10 µM	MCF-7 cell proliferation assay
309	4193	251	Mammalian	Human	MCF-7 cells (E3 clone)		*In vitro*	Lab		9 d		37	10 µM	MCF-7 cell proliferation assay
309	4194	244	Mammalian	Human	MCF-7 cells (E3 clone)		*In vitro*	Lab		9 d		37	10 µM	MCF-7 cell proliferation assay
309	4195	252	Mammalian	Human	MCF-7 cells (E3 clone)		*In vitro*	Lab		9 d		37	10 µM	MCF-7 cell proliferation assay
309	4196	356	Mammalian	Human	MCF-7 cells (E3 clone)		*In vitro*	Lab		9 d		37	10 µM	MCF-7 cell proliferation assay
309	4197	239	Mammalian	Human	MCF-7 cells (E3 clone)		*In vitro*	Lab		9 d		37	10 µM	MCF-7 cell proliferation assay
309	4198	566	Mammalian	Human	MCF-7 cells (E3 clone)		*In vitro*	Lab		9 d		37	10 µM	MCF-7 cell proliferation assay

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
309	4199	572	Mammalian	Human	MCF-7 cells (E3 clone)		*In vitro*	Lab		9 d		37	10 µM	MCF-7 cell proliferation assay
309	4200	573	Mammalian	Human	MCF-7 cells (E3 clone)		*In vitro*	Lab		9 d		37	10 µM	MCF-7 cell proliferation assay
309	4201	407	Mammalian	Human	MCF-7 cells (E3 clone)		*In vitro*	Lab		9 d		37	10 µM	MCF-7 cell proliferation assay
309	4202	574	Mammalian	Human	MCF-7 cells (E3 clone)		*In vitro*	Lab		9 d		37	10 µM	MCF-7 cell proliferation assay
309	4203	569	Mammalian	Human	MCF-7 cells (E3 clone)		*In vitro*	Lab		9 d		37	10 µM	MCF-7 cell proliferation assay
309	4204	405	Mammalian	Human	MCF-7 cells (E3 clone)		*In vitro*	Lab		9 d		37	10 µM	MCF-7 cell proliferation assay
309	4205	570	Mammalian	Human	MCF-7 cells (E3 clone)		*In vitro*	Lab		9 d		37	10 µM	MCF-7 cell proliferation assay
309	4206	243	Mammalian	Human	MCF-7 cells (E3 clone)		*In vitro*	Lab		9 d		37	10 µM	MCF-7 cell proliferation assay
309	4207	266	Mammalian	Human	MCF-7 cells (E3 clone)		*In vitro*	Lab		9 d		37	10 µM	MCF-7 cell proliferation assay
309	4208	565	Mammalian	Human	MCF-7 cells (E3 clone)		*In vitro*	Lab		9 d		37	10 µM	MCF-7 cell proliferation assay
311	4239	677	Mammalian	Human	ERalpha		*In vitro*	Lab					100 nM - 10 µM	Competitive ligand-binding assay
311	4240	390	Mammalian	Human	ERalpha		*In vitro*	Lab					100 nM - 10 µM	Competitive ligand-binding assay
311	4241	678	Mammalian	Human	ERalpha		*In vitro*	Lab					100 nM - 10 µM	Competitive ligand-binding assay
311	4242	679	Mammalian	Human	ERalpha		*In vitro*	Lab					100 nM - 10 µM	Competitive ligand-binding assay
311	4243	680	Mammalian	Human	ERalpha		*In vitro*	Lab					100 nM - 10 µM	Competitive ligand-binding assay
311	4244	681	Mammalian	Human	ERalpha		*In vitro*	Lab					100 nM - 10 µM	Competitive ligand-binding assay
311	4245	682	Mammalian	Human	ERalpha		*In vitro*	Lab					100 nM - 10 µM	Competitive ligand-binding assay
311	4246	683	Mammalian	Human	ERalpha		*In vitro*	Lab					100 nM - 10 µM	Competitive ligand-binding assay
311	4249	383	Mammalian	Human	ERalpha		*In vitro*	Lab					10 nM - 10 µM	Competitive ligand-binding assay
311	4250	65	Mammalian	Human	ERalpha		*In vitro*	Lab					10 nM - 10 µM	Competitive ligand-binding assay
311	4251	423	Mammalian	Human	ERalpha		*In vitro*	Lab					10 nM - 10 µM	Competitive ligand-binding assay
313	4266	252	Mammalian	Human	hAR		*In vitro*	Lab		2 h		37	EC50 = 20 µM	COS cells transiently transfected with hAR
313	4268	252	Mammalian	Human	hAR		*In vitro*	Lab		5-6 h			EC50 = 10 µM	CV-1 cells transiently transfected with hAR

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
313	4269	252	Mammalian	Human	hAR		*In vitro*	Lab		Overnight		37	EC50 = 10 µM	MDA-MB-453-KB2 cells containing endogenous hAR
315	4278	313	Mammalian	Human	Keratinocyte line SCC-4		*In vitro*	Lab		48 h			10 nM	SCC-4 cells from squamous carcinoma of the human tongue
323	4290	350	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		24 h		37	EC50 = 1 µM	
323	4291	685	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		24 h		37	EC50 = 1.2 µM	
323	4292	686	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		24 h		37	EC50 = 0.7 µM	
323	4293	687	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		24 h		37	up to 10 µM	
323	4294	688	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		24 h		37	0.01-1 µM	
319	4306	691	Mammalian	Human			*In vitro*	Lab		Overnight		4	1.95 nM - 5 µM	T4-transthyretin competition binding study
319	4307	692	Mammalian	Human			*In vitro*	Lab		Overnight		4	1.95 nM - 30 µM	T4-transthyretin competition binding study
319	4308	693	Mammalian	Human			*In vitro*	Lab		Overnight		4	IC50 = 1.4 µM	T4-transthyretin competition binding study
319	4309	694	Mammalian	Human			*In vitro*	Lab		Overnight		4	IC50 = 67.2 nM	T4-transthyretin competition binding study
319	4310	695	Mammalian	Human			*In vitro*	Lab		Overnight		4	IC50 = 11.5 nM	T4-transthyretin competition binding study
319	4311	696	Mammalian	Human			*In vitro*	Lab		Overnight		4	1.95 nM - 5 µM	T4-transthyretin competition binding study
319	4312	697	Mammalian	Human			*In vitro*	Lab		Overnight		4	1.95 nM - 5 µM	T4-transthyretin competition binding study
319	4313	157	Mammalian	Human			*In vitro*	Lab		Overnight		4	1.95 nM - 0.5 µM	T4-transthyretin competition binding study
319	4314	698	Mammalian	Human			*In vitro*	Lab		Overnight		4	1.95 nM - 0.5 µM	T4-transthyretin competition binding study
319	4315	699	Mammalian	Human			*In vitro*	Lab		Overnight		4	1.95 nM - 0.5 µM	T4-transthyretin competition binding study
319	4316	700	Mammalian	Human			*In vitro*	Lab		Overnight		4	IC50 = 140 nM	T4-transthyretin competition binding study
319	4317	656	Mammalian	Human			*In vitro*	Lab		Overnight		4	IC50 = 7.7 nM	T4-transthyretin competition binding study
319	4318	705	Mammalian	Human			*In vitro*	Lab		Overnight		4	IC50 = 106.8 nM	T4-transthyretin competition binding study
319	4319	702	Mammalian	Human			*In vitro*	Lab		Overnight		4	up to 5 mg	T4-transthyretin competition binding study

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
319	4320	591	Mammalian	Human			*In vitro*	Lab		Overnight		4	1.95 nM - 5 µM	T4-transthyretin competition binding study
319	4321	703	Mammalian	Human			*In vitro*	Lab		Overnight		4	1.95 nM - 5 µM	T4-transthyretin competition binding study
319	4322	704	Mammalian	Human			*In vitro*	Lab		Overnight		4	1.95 nM - 5 µM	T4-transthyretin competition binding study
319	4323	706	Mammalian	Human			*In vitro*	Lab		Overnight		4	1.95 nM - 5 µM	T4-transthyretin competition binding study
319	4324	710	Mammalian	Human			*In vitro*	Lab		Overnight		4	1.95 nM - 0.5 µM	T4-transthyretin competition binding study
319	4325	707	Mammalian	Human			*In vitro*	Lab		Overnight		4	IC50 = 199.2 nM	T4-transthyretin competition binding study
319	4326	708	Mammalian	Human			*In vitro*	Lab		Overnight		4	IC50 = 66 nM	T4-transthyretin competition binding study
319	4327	709	Mammalian	Human			*In vitro*	Lab		Overnight		4	IC50 = 57 nM	T4-transthyretin competition binding study
319	4328	711	Mammalian	Human			*In vitro*	Lab		Overnight		4	Metabolites: max 250 nM	Metabolization by incubation with rat hepatic microsomes prior to use; max concentration with 100% conversion; T4-transthyretin competition binding study
319	4329	712	Mammalian	Human			*In vitro*	Lab		Overnight		4	Metabolites: max 250 nM	Metabolization by incubation with rat hepatic microsomes prior to use; max concentration with 100% conversion; T4-transthyretin competition binding study
319	4330	713	Mammalian	Human			*In vitro*	Lab		Overnight		4	Metabolites: max 250 nM	Metabolization by incubation with rat hepatic microsomes prior to use; max concentration with 100% conversion; T4-transthyretin competition binding study
319	4331	715	Mammalian	Human			*In vitro*	Lab		Overnight		4	Metabolites: max 250 nM	Metabolization by incubation with rat hepatic microsomes prior to use; max concentration with 100% conversion; T4-transthyretin competition binding study
319	4332	716	Mammalian	Human			*In vitro*	Lab		Overnight		4	Metabolites: max 250 nM	Metabolization by incubation with rat hepatic microsomes prior to use; max concentration with 100% conversion; T4-transthyretin competition binding study

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
319	4333	717	Mammalian	Human			*In vitro*	Lab		Overnight		4	Metabolites: max 250 nM	Metabolization by incubation with rat hepatic microsomes prior to use; max concentration with 100% conversion; T4-transthyretin competition binding study
319	4334	718	Mammalian	Human			*In vitro*	Lab		Overnight		4	Metabolites: max 250 nM	Metabolization by incubation with rat hepatic microsomes prior to use; max concentration with 100% conversion; T4-transthyretin competition binding study
319	4335	719	Mammalian	Human			*In vitro*	Lab		Overnight		4	Metabolites: max 250 nM	Metabolization by incubation with rat hepatic microsomes prior to use; max concentration with 100% conversion; T4-transthyretin competition binding study
319	4336	721	Mammalian	Human			*In vitro*	Lab		Overnight		4	Metabolites: max 250 nM	Metabolization by incubation with rat hepatic microsomes prior to use; max concentration with 100% conversion; T4-transthyretin competition binding study
319	4337	722	Mammalian	Human			*In vitro*	Lab		Overnight		4	Metabolites: max 250 nM	Metabolization by incubation with rat hepatic microsomes prior to use; max concentration with 100% conversion; T4-transthyretin competition binding study
319	4338	714	Mammalian	Human			*In vitro*	Lab		Overnight		4	Metabolites: max 250 nM	Metabolization by incubation with rat hepatic microsomes prior to use; max concentration with 100% conversion; T4-transthyretin competition binding study
319	4339	720	Mammalian	Human			*In vitro*	Lab		Overnight		4	Metabolites: max 250 nM	Metabolization by incubation with rat hepatic microsomes prior to use; max concentration with 100% conversion; T4-transthyretin competition binding study
319	4340	310	Mammalian	Human			*In vitro*	Lab		Overnight		4	Metabolites: max 250 nM	Metabolization by incubation with rat hepatic microsomes prior to use; max concentration with 100% conversion; T4-transthyretin competition binding study

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
319	4341	723	Mammalian	Human			*In vitro*	Lab		Overnight		4	Metabolites: max 250 nM	Metabolization by incubation with rat hepatic microsomes prior to use; max concentration with 100% conversion; T4-transthyretin competition binding study
319	4342	724	Mammalian	Human			*In vitro*	Lab		Overnight		4	Metabolites: max 250 nM	Metabolization by incubation with rat hepatic microsomes prior to use; max concentration with 100% conversion; T4-transthyretin competition binding study
319	4343	725	Mammalian	Human			*In vitro*	Lab		Overnight		4	Metabolites: max 250 nM	Metabolization by incubation with rat hepatic microsomes prior to use; max concentration with 100% conversion; T4-transthyretin competition binding study
319	4344	726	Mammalian	Human			*In vitro*	Lab		Overnight		4	Metabolites: max 250 nM	Metabolization by incubation with rat hepatic microsomes prior to use; max concentration with 100% conversion; T4-transthyretin competition binding study
355	4429	278	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		16 h			3 nM - 10 µM	Nonylphenolmixture
355	4430	65	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		16 h			0.03-10 µM	
355	4431	415	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		16 h			0.03-10 µM	
355	4432	358	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		16 h			0.03-10 µM	
355	4433	313	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		16 h			0.003-1 µM	
355	4439	464	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		16 h				Sewage treatment works influent and effluent
359	4453	157	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		5 d		37	0.05 µM	E-screen assay
359	4454	277	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		5 d		37	0.05 µM	E-screen assay
359	4455	65	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		5 d		37	0.05 µM	E-screen assay; technical 4-nonylphenol
359	4456	279	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		5 d		37	2 µM	E-screen assay

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
359	4457	508	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		5 d		37	1 µM	E-screen assay
359	4458	464	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		5 d		37		E-screen assay; effluent samples from municipal sewage plants
361	4462	275	Mammalian	Human		Neonate	*In vivo*	Field			Breast milk		Median: 0.06-0.51 mg/kg	Breast milk of women sampled from 1986 to 1997
361	4463	357	Mammalian	Human		Neonate	*In vivo*	Field			Breast milk		Median: 0.03-0.19 mg/kg	Breast milk of women sampled from 1986 to 1997
369	4510	277	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		5 d		37	0.183-0.321 µg/l	E-screen; concentrations in influent of municipal sewage plant; other chemicals measured: 4-nonylphenol, bisphenol A, 4-chloro-3-methylphenol and butylhydroxyanisole
369	4511	65	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		5 d		37	2.13-2.59 µg/l	E-screen; concentrations in influent of municipal sewage plant; chemicals measured: 4-tert-octylphenol, 4-nonylphenol, bisphenol A, 4-chloro-3-methylphenol and butylhydroxyanisole
369	4512	157	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		5 d		37	0.542-3.01 µg/l	E-screen; concentrations in influent of municipal sewage plant; chemicals measured: 4-tert-octylphenol, 4-nonylphenol, bisphenol A, 4-chloro-3-methylphenol and butylhydroxyanisole
369	4513	288	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		5 d		37	1.54-3.64 µg/l	E-screen; concentrations in influent of municipal sewage plant; chemicals measured: 4-tert-octylphenol, 4-nonylphenol, bisphenol A, 4-chloro-3-methylphenol and butylhydroxyanisole

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
369	4514	385	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		5 d		37	0.13-0.5 µg/l	E-screen; concentrations in influent of municipal sewage plant; chemicals measured: 4-tert-octylphenol, 4-nonylphenol, bisphenol A, 4-chloro-3-methylphenol and butylhydroxyanisole
369	4515	513	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		5 d		37	< 0.007-0.031 µg/l	E-screen; concentrations in influent of municipal sewage plant; chemicals measured: 4-tert-octylphenol, 4-nonylphenol, bisphenol A, 4-chloro-3-methylphenol and butylhydroxyanisole
369	4516	277	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		5 d		37	0.281-0.357 µg/l	E-screen; concentrations in effluent of municipal sewage plant; other chemicals measured: 4-nonylphenol, bisphenol A, 4-chloro-3-methylphenol and butylhydroxyanisole
369	4517	65	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		5 d		37	0.32-1.57 µg/l	E-screen; concentrations in effluent of municipal sewage plant; other chemicals measured: 4-nonylphenol, bisphenol A, 4-chloro-3-methylphenol and butylhydroxyanisole
369	4518	157	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		5 d		37	0.162-0.258 µg/l	E-screen; concentrations in effluent of municipal sewage plant; other chemicals measured: 4-nonylphenol, bisphenol A, 4-chloro-3-methylphenol and butylhydroxyanisole
372	4530	276	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		5 d		37	LOEC(max) = 10 µM	E-screen
372	4531	277	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		5 d		37	LOEC(max) = 1 µM	E-screen
372	4532	65	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		5 d		37	LOEC(max) = 10 µM	E-screen; technical grade
372	4533	157	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		5 d		37	LOEC(max) = 4 µM	E-screen
372	4534	528	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		5 d		37	LOEC(max) = 4 µM	E-screen

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
372	4535	508	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		5 d		37	LOEC(max) = 8 µM	E-screen
372	4536	279	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		5 d		37	LOEC(max) = 30 µM	E-screen
372	4537	285	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		5 d		37	LOEC(max) = 90 µM	E-screen
372	4538	513	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		5 d		37	LOEC(max) = 50 µM	E-screen
372	4539	656	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		5 d		37	LOEC(max) = 20 µM	E-screen
372	4540	385	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		5 d		37	LOEC(max) = 50 µM	E-screen
372	4541	384	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		5 d		37	LOEC(max) = 100 µM	E-screen
372	4542	756	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		5 d		37	up to 0.1 mM	E-screen
372	4543	757	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		5 d		37	up to 0.1 mM	E-screen
372	4544	274	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		5 d		37	up to 0.1 mM	E-screen
372	4545	758	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		5 d		37	50 µM	E-screen
377	4585	313	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		14 d			0.1-10 nM	
377	4586	470	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		14 d			IC50 = 1 µM	
377	4587	762	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		14 d			0.05-5 µM	
377	4588	502	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		14 d			0.05-5 µM	
377	4589	763	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		14 d			0.05-5 µM	
377	4590	768	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		14 d			0.05-5 µM	
377	4591	764	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		14 d			0.05-5 µM	
377	4592	505	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		14 d			0.05-5 µM	
377	4593	765	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		14 d			0.05-5 µM	
377	4594	598	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		14 d			0.05-5 µM	
377	4595	766	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		14 d			0.05-5 µM	
377	4596	499	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		14 d			0.05-5 µM	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
377	4597	767	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		14 d			5 µM	
377	4598	506	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		14 d			5 µM	
379	4600	313	Mammalian	Human		Postnatal	*In vivo*	Field		1 year	Breast milk		Mean total TEQ: 34 ng/Kg body weight	Total intake of polychlorinated dibenzo-p-dioxins, polychlorinated dibenzofurans and coplanar polychlorinated biphenyls in TEQ; range: 6-84 ng/kgbody weight
400	4649	383	Mammalian	Human	MCF-7 cells		*In vitro*	Lab						
400	4650	771	Mammalian	Human	MCF-7 cells		*In vitro*	Lab						
400	4651	242	Mammalian	Human	MCF-7 cells		*In vitro*	Lab						
400	4652	355	Mammalian	Human	MCF-7 cells		*In vitro*	Lab						
408	4691	368	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		18 h		37	100 nM	
408	4692	776	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		18 h		37	100 nM	
408	4693	778	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		18 h		37	100 nM	
408	4694	367	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		18 h		37	100 nM	
408	4695	365	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		18 h		37	100 nM	
408	4696	777	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		18 h		37	100 nM	
408	4697	258	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		18 h		37	100 nM	
408	4698	368	Mammalian	Human	Ishikawa Endometrial cancer cells		*In vitro*	Lab		18 h		37	100 nM	
408	4699	776	Mammalian	Human	Ishikawa Endometrial cancer cells		*In vitro*	Lab		18 h		37	100 nM	
408	4700	778	Mammalian	Human	Ishikawa Endometrial cancer cells		*In vitro*	Lab		18 h		37	100 nM	
408	4701	367	Mammalian	Human	Ishikawa Endometrial cancer cells		*In vitro*	Lab		18 h		37	100 nM	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
408	4702	365	Mammalian	Human	Ishikawa Endometrial cancer cells		*In vitro*	Lab		18 h		37	100 nM	
408	4703	777	Mammalian	Human	Ishikawa Endometrial cancer cells		*In vitro*	Lab		18 h		37	100 nM	
408	4704	258	Mammalian	Human	Ishikawa Endometrial cancer cells		*In vitro*	Lab		18 h		37	100 nM	
408	4705	368	Mammalian	Human	T47D cells		*In vitro*	Lab		18 h		37	100 nM	
408	4706	776	Mammalian	Human	T47D cells		*In vitro*	Lab		18 h		37	100 nM	
408	4707	778	Mammalian	Human	T47D cells		*In vitro*	Lab		18 h		37	100 nM	
408	4708	367	Mammalian	Human	T47D cells		*In vitro*	Lab		18 h		37	100 nM	
408	4709	365	Mammalian	Human	T47D cells		*In vitro*	Lab		18 h		37	100 nM	
408	4710	777	Mammalian	Human	T47D cells		*In vitro*	Lab		18 h		37	100 nM	
408	4711	258	Mammalian	Human	T47D cells		*In vitro*	Lab		18 h		37	100 nM	
408	4712	368	Mammalian	Human	hER		*In vitro*	Lab		1 h		37	10 µM	Whole cell competition binding assay with MCF-7 cells
408	4713	776	Mammalian	Human	hER		*In vitro*	Lab		1 h		37	10 µM	Whole cell competition binding assay with MCF-7 cells
408	4714	778	Mammalian	Human	hER		*In vitro*	Lab		1 h		37	10 µM	Whole cell competition binding assay with MCF-7 cells
408	4715	367	Mammalian	Human	hER		*In vitro*	Lab		1 h		37	IC50 = 6 µM	Whole cell competition binding assay with MCF-7 cells
408	4716	365	Mammalian	Human	hER		*In vitro*	Lab		1 h		37	IC 50 = 10 µM	Whole cell competition binding assay with MCF-7 cells
408	4717	777	Mammalian	Human	hER		*In vitro*	Lab		1 h		37	10 µM	Whole cell competition binding assay with MCF-7 cells

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
408	4718	368	Mammalian	Human	hPR		*In vitro*	Lab		18 h		37	10 µM	Whole cell competition binding assay with T47D cells
408	4719	776	Mammalian	Human	hPR		*In vitro*	Lab		18 h		37	1-10 µM	Whole cell competition binding assay with T47D cells
408	4720	778	Mammalian	Human	hPR		*In vitro*	Lab		18 h		37	10 µM	Whole cell competition binding assay with T47D cells
408	4721	367	Mammalian	Human	hPR		*In vitro*	Lab		18 h		37	1-10 µM	Whole cell competition binding assay with T47D cells
408	4722	365	Mammalian	Human	hPR		*In vitro*	Lab		18 h		37	1-10 µM	Whole cell competition binding assay with T47D cells
408	4723	777	Mammalian	Human	hPR		*In vitro*	Lab		18 h		37	0.1-10 µM	Whole cell competition binding assay with T47D cells
408	4724	258	Mammalian	Human	hPR		*In vitro*	Lab		18 h		37	1-10 µM	Whole cell competition binding assay with T47D cells
415	4733	236	Mammalian	Human	MCF7-E3 cells		*In vitro*	Lab		3 d			10 µM	Dose range: 0.1-1000 µM; technical mixture
415	4734	779	Mammalian	Human	MCF7-E3 cells		*In vitro*	Lab		3 d			10 µM	Dose range: 0.1-10 µM
415	4735	780	Mammalian	Human	MCF7-E3 cells		*In vitro*	Lab		3 d			10 µM	Dose range: 0.1-10 µM
416	4736	477	Mammalian	Human	MCF-7 cells		*In vitro*	Lab					up to 5 µM	
416	4737	611	Mammalian	Human	MCF-7 cells		*In vitro*	Lab					up to 5 µM	
416	4738	346	Mammalian	Human	MCF-7 cells		*In vitro*	Lab					up to 5 µM	
416	4739	760	Mammalian	Human	MCF-7 cells		*In vitro*	Lab					up to 5 µM	
416	4740	478	Mammalian	Human	MCF-7 cells		*In vitro*	Lab					up to 5 µM	
416	4741	476	Mammalian	Human	MCF-7 cells		*In vitro*	Lab					up to 5 µM	
416	4742	347	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		14 d		37	IC50 = 0.32 µM	MCF-7 focus assay
416	4743	351	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		14 d		37	IC50 = 0.03 µM	MCF-7 focus assay

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
416	4744	348	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		14 d		37	IC50 = 0.07 µM	MCF-7 focus assay
416	4745	349	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		14 d		37	IC50 = 0.01 µM	MCF-7 focus assay
416	4746	612	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		14 d		37	IC50 = 2.6 µM	MCF-7 focus assay
416	4747	350	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		14 d		37	IC50 = 0.02 µM	MCF-7 focus assay
416	4748	613	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		14 d		37	IC50 = 0.04 µM	MCF-7 focus assay
416	4749	352	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		14 d		37	IC50 = 0.01 µM	MCF-7 focus assay
416	4750	347	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		3 h		37	5 µM	Whole-cell competitive ER binding assay
416	4751	351	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		3 h		37	5 µM	Whole-cell competitive ER binding assay
416	4752	348	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		3 h		37	5 µM	Whole-cell competitive ER binding assay
416	4753	349	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		3 h		37	5 µM	Whole-cell competitive ER binding assay
416	4754	612	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		3 h		37	5 µM	Whole-cell competitive ER binding assay
416	4755	350	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		3 h		37	5 µM	Whole-cell competitive ER binding assay
416	4756	613	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		3 h		37	5 µM	Whole-cell competitive ER binding assay
416	4758	352	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		3 h		37	5 µM	Whole-cell competitive ER binding assay
416	4759	347	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		72 h			1 µM	Radiometric analysis of 17-beta-estradiol metabolism
416	4760	349	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		72 h			1 µM	Radiometric analysis of 17-beta-estradiol metabolism
416	4761	613	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		72 h			1 µM	Radiometric analysis of 17-beta-estradiol metabolism
416	4762	352	Mammalian	Human	MCF-7 cells		*In vitro*	Lab		72 h			1 µM	Radiometric analysis of 17-beta-estradiol metabolism
418	4777	448	Mammalian	Human	Plasma		*In vitro*	Lab		60 min		37		
418	4778	376	Mammalian	Human	Plasma		*In vitro*	Lab		60 min		37		

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
418	4779	277	Mammalian	Human	Plasma		*In vitro*	Lab		60 min		37		
418	4780	157	Mammalian	Human	Plasma		*In vitro*	Lab		60 min		37		
418	4781	65	Mammalian	Human	Plasma		*In vitro*	Lab		60 min		37		
418	4782	508	Mammalian	Human	Plasma		*In vitro*	Lab		60 min		37		
418	4783	279	Mammalian	Human	Plasma		*In vitro*	Lab		60 min		37		
418	4784	285	Mammalian	Human	Plasma		*In vitro*	Lab		60 min		37		
419	4785	377	Mammalian	Human	ER		*In vitro*	Lab		1 h		25	IC50 = 0.01 µM	Competition binding assay
419	4786	449	Mammalian	Human	ER		*In vitro*	Lab		1 h		25	IC50 = 0.3 µM	Competition binding assay
419	4787	376	Mammalian	Human	ER		*In vitro*	Lab		1 h		25	IC50 = 2 µM	Competition binding assay
419	4788	451	Mammalian	Human	ER		*In vitro*	Lab		1 h		25	IC50 = 6 µM	Competition binding assay
419	4789	754	Mammalian	Human	ER		*In vitro*	Lab		1 h		25	IC50 = 6 µM	Competition binding assay
419	4790	446	Mammalian	Human	ER		*In vitro*	Lab		1 h		25	IC50 = 22 µM	Competition binding assay
419	4791	755	Mammalian	Human	ER		*In vitro*	Lab		1 h		25	IC50 = 30 µM	Competition binding assay
419	4792	453	Mammalian	Human	ER		*In vitro*	Lab		1 h		25	IC50 = 33 µM	Competition binding assay
419	4793	445	Mammalian	Human	ER		*In vitro*	Lab		1 h		25	IC50 = 44 µM	Competition binding assay
419	4794	448	Mammalian	Human	ER		*In vitro*	Lab		1 h		25	IC50 = 45 µM	Competition binding assay
419	4795	782	Mammalian	Human	ER		*In vitro*	Lab		1 h		25	IC50 = 45 µM	Competition binding assay
420	4808	766	Mammalian	Human	ER		*In vitro*	Lab		4 h	Room temperature		0.01-100 µM	ER binding assay
420	4809	499	Mammalian	Human	ER		*In vitro*	Lab		4 h	Room temperature		IC50 = 79 nM	ER binding assay
422	4816	783	Mammalian	Human	T-47-D cells		*In vitro*	Lab		48 h			1-10 nM	Dose range: 1-1000 nM
422	4817	297	Mammalian	Human	T-47-D cells		*In vitro*	Lab		48 h			1-1000 nM	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
422	4818	783	Mammalian	Human	MCF7 McGrath cells		*In vitro*	Lab		14 d			0.1 nM - 1 µM	
422	4819	783	Mammalian	Human	ZR-75-1cells		*In vitro*	Lab		14 d			0.1 nM	Dose range: 0.1 nM - 1 µM
422	4820	297	Mammalian	Human	MCF7 McGrath cells		*In vitro*	Lab		14 d			0.1 nM - 1 µM	
422	4821	297	Mammalian	Human	ZR-75-1cells		*In vitro*	Lab		14 d			0.1 nM - 1 µM	
422	4822	470	Mammalian	Human	MCF7 McGrath cells		*In vitro*	Lab		14 d			0.1 nM - 1 µM	
422	4823	784	Mammalian	Human	MCF7 McGrath cells		*In vitro*	Lab		14 d			0.1 nM - 1 µM	
184	3046	485	Mammalian	Human, female			*In vivo*	Field			Environmental contamination			Epidemiological study; triazine herbicides (atrazine, simazine and cyanazine) in surface water and groundwater
184	3047	260	Mammalian	Human, female			*In vivo*	Field			Environmental contamination			Epidemiological study; triazine herbicides (atrazine, simazine and cyanazine) in surface water and groundwater
184	3048	261	Mammalian	Human, female			*In vivo*	Field			Environmental contamination			Epidemiological study; triazine herbicides (atrazine, simazine and cyanazine) in surface water and groundwater
229	3546	313	Mammalian	Human, female	Luteinized granulosa cells	< 35 y (regular menstrual cycle)	*In vitro*	Lab		48 h			3.1 pM - 3.1 µM	
290	4025	303	Mammalian	Human, female			*In vivo*	Field			Occupational exposure			Epidemiological study
290	4026	529	Mammalian	Human, female			*In vivo*	Field			Occupational exposure			Epidemiological study
290	4027	157	Mammalian	Human, female			*In vivo*	Field			Occupational exposure			Epidemiological study
307	4182	675	Mammalian	Human, female	Pregnancy serum		*In vitro*	Lab		1 h		37	100-220 mg/l	Competitive ligand binding assay in human serum

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
421	4810	225	Mammalian	Human, female			*In vivo*	Field					Median: 24.42 ng/g blood	Epidemiological study
421	4811	357	Mammalian	Human, female			*In vivo*	Field					Median: 118.94 ng/g blood	Epidemiological study
421	4812	240	Mammalian	Human, female			*In vivo*	Field					Median: 1325.95 ng/g blood	Epidemiological study; total DDT concentration
421	4813	241	Mammalian	Human, female			*In vivo*	Field					Median: 141.35 ng/g blood	Epidemiological study
421	4814	358	Mammalian	Human, female			*In vivo*	Field					Median: 1182.98 ng/g blood	Epidemiological study
421	4815	289	Mammalian	Human, female			*In vivo*	Field					Median: 1088.89 ng/g blood	Epidemiological study; total PCB concentration
99	2656	250	Mammalian	Human, male		Mean age 40 y	*In vivo*	Field		Mean exposure 8 y	Occupational		Serum: 36.6 µg/l	Epidemiological study
140	2765	265	Mammalian	Human, male			*In vivo*	Field		Average exposure of 5 y	Occupational via inhalation		88 ppb (8 h time weighted average)	Peak exposures up to 262 ppb, epidemiological study
141	2766	265	Mammalian	Human, male			*In vivo*	Field		Average exposure 6 w	Occupational via inhalation		0.46 mg/m3	Peak exposures up to 16 mg/m3, epidemiological study
142	2767	265	Mammalian	Human, male			*In vivo*	Field			Occupational via inhalation		38.5 mg/m3 (5 ppm)	Epidemiological study
183	3045	148	Mammalian	Human, male		22-39 y	*In vivo*	Field		up to > 6 y	Occupational		Mean = 29.6 ppm	
251	3777	480	Mammalian	Human, male		Adult	*In vivo*	Field			Occupational		58 ppb (mean urinary level)	Applicators of ethylenebis (dithiocarbamates) (e.g. mancozeb, maneb) which are metabolized to ETU

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
276	3979	280	Mammalian	Human, male	Testis	Mean: 41 y	*In vivo*	Field			Occupational			Epidemiological study; evaluation of PVC exposure; di-(2-ethylhexyl)phtalate major component in PVC; age: 30-75 years
308	4188	214	Mammalian	Human, male			*In vivo*	Field		up to 28 y	Occupational		Mean blood level: 35 µg/dl	Epidemiological study
358	4452	325	Mammalian	Human, male		25-72 y (mean: 37)	*In vivo*	Field			Consumption of fish and shellfish		Mean: 4.23 ppm	Concentration measured in the hair
375	4558	759	Mammalian	Human, male	Testis	Mean: 41 y	*In vivo*	Field			Occupational			Epidemiological study; evaluation of PVC exposure; di-(2-ethylhexyl)phtalate major component in PVC; age: 30-75 years
307	4181	675	Mammalian	ICR mouse, female	Uterus	Weanling	*In vitro*	Lab		30 min		30	IC50 = 135 mg/l	Competitive ligand binding assay in mouse uterine cytosol
151	2780	275	Mammalian	ICR mouse, male		Adult	*In vivo*	Lab		21 d	Food		250 mg/kg/food	Concentration range: 2.5-250 mg/kg/food
326	4298	245	Mammalian	Long Evans hooded rat, male		Prenatal	*In vivo*	Lab		Gestation day 14-15, 16-17, 18-19	In utero	68-72°F	400 mg/kg body weight/d	Dams were dosed orally; No significant effects when dosed on gestation day 13-13 or 20-21
326	4299	245	Mammalian	Long Evans hooded rat, male		Prenatal	*In vivo*	Lab		Gestation day 14-19	In utero	68-72°F	200-400 mg/kg body weight/d	Dams were dosed orally
56	2558	230	Mammalian	Long Evans rat, female		21 d	*In vivo*	Lab		5 d	Intraperitoneal		40 mg/kg	Ovariectomized and 17-beta-estradiol-3-benzoate (EB)-primed
56	2664	250	Mammalian	Long Evans rat, female		21 d	*In vivo*	Lab		5 d	Oral		10-40 mg/kg	Ovariectomized and 17-beta-estradiol-3-benzoate (EB)-primed
56	2665	250	Mammalian	Long Evans rat, female		60 d	*In vivo*	Lab		5 d	Oral		10-40 mg/kg	Ovariectomized and 17-beta-estradiol-3-benzoate (EB)-primed

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
88	2619	245	Mammalian	Long Evans rat, pregnant			*In vivo*	Lab		Day 14 of gestation - postnatal day 3	Oral		200 mg/kg/d	Concentration range: 100 and 200 mg/kg/day; no effects on female offspring
137	2748	260	Mammalian	Long-Evans hooded rat	Ovary	Females with regular 4-day cycles	*In vivo*	Lab		21 d	Oral		75-300 mg/kg/d	
159	2822	277	Mammalian	Long-Evans hooded rat, female		Adult	*In vivo*	Lab		3 d			100-200 mg/kg body weight/d	
93	2638	247	Mammalian	Long-Evans rat, female		Adult	*In vivo*	Lab			Intraperitoneal		LOEL = 12 mg/kg	Single dose, concentration range: 6-100 mg/kg
139	2762	264	Mammalian	Long-Evans rat, male		12 w	*In vivo*	Lab		120 d	Food		126 mg/kg body weight/d	Endpoints measured on day 7, 14, 28, 60 and 120
165	2971	289	Mammalian	Lutra lutra (European otter)			*In vivo*	Field			Environmental concentrations		0.1 to 56 ng TEQ/g lipid	Concentration in liver; epidemiological study
165	2972	289	Mammalian	Lutra lutra (European otter)			*In vivo*	Field			Environmental concentrations		0.17 to 1.59 pg TEQ/ml plasma	Epidemiological study
321	4286	284	Mammalian	Macaca fascicularis (Cynomolgus monkey)		Young adult (~2 y)	*In vivo*	Lab		14 d	Intragastric intubation	66-78°F	500 mg/kg/d	
321	4287	280	Mammalian	Macaca fascicularis (Cynomolgus monkey)		Young adult (~2 y)	*In vivo*	Lab		14 d	Intragastric intubation	66-78°F	500 mg/kg/d	
321	4288	684	Mammalian	Macaca fascicularis (Cynomolgus monkey)		Young adult (~2 y)	*In vivo*	Lab		14 d	Intragastric intubation	66-78°F	250 mg/kg/d	
75	2592	238	Mammalian	Microtus pennsylvanicus (Meadow vole)			*In vivo*	Field		6 m	Field application		567.5 g/ha	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
87	2621	245	Mammalian	Monkey	Kidney COS-1 and CV1 cells		*In vitro*	Lab					10 µM	
87	2622	245	Mammalian	Monkey	Kidney COS-1 and CV1 cells		*In vitro*	Lab					50 µM	
87	2623	400	Mammalian	Monkey	Kidney COS-1 and CV1 cells		*In vitro*	Lab					10 µM	
87	2624	401	Mammalian	Monkey	Kidney COS-1 and CV1 cells		*In vitro*	Lab					0.2 µM	
87	2625	401	Mammalian	Monkey	Kidney COS-1 and CV1 cells		*In vitro*	Lab					10 µM	
91	2636	246	Mammalian	Monkey			*In vivo*	Lab		6 m	Food		300 ppm	Dose equivalent to 21.9 mg/kg body weight/day
21	2490	223	Mammalian	Mouse			*In vivo*	Lab		6 genera-tions	Food		LOEL = 50 mg/kg	
21	2491	223	Mammalian	Mouse			*In vivo*	Lab		6 genera-tions	Food		LOEL = 100 mg/kg	
22	2494	233	Mammalian	Mouse			*In vivo*	Lab		30 d	Food		0.08-0.25 mg	Chlordane containing both cis- and trans-isomer
22	2495	234	Mammalian	Mouse			*In vivo*	Lab		30 d	Food		0.08-0.25 mg	Chlordane containing both cis- and trans-isomer
62	2569	231	Mammalian	Mouse			*In vivo*	Lab		3 m	Food		LOEL = 1.8 mg/kg	
91	2631	246	Mammalian	Mouse			*In vivo*	Lab		79 w	Food		240 ppm	Dose equivalent to 44 mg/kg body weight/day
91	2648	248	Mammalian	Mouse			*In vivo*	Lab			Maternal transfer		up to 2000 mg/kg body weight/d	
120	2698	254	Mammalian	Mouse		Adult	*In vivo*	Lab		5-g study	Drinking water		60 mg/l	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
67	2730	259	Mammalian	Mouse	Thyroid	Adult	*In vivo*	Lab		90 w	Oral		1000 mg/kg body weight/d	
67	2731	259	Mammalian	Mouse	Thyroid		*In vivo*	Lab		18 m	Food		100 ppm	Concentration range: 1-100 ppm
167	2975	355	Mammalian	Mouse	Uterus	Adult	*In vivo*	Lab		18 h	Subcutaneous		3.75-60 mg/kg body weight	Concentration range: 1.8-60 mg/kg body weight; 2 injections 6 h apart
175	3009	349	Mammalian	Mouse	Hepa lclc7 cells		*In vitro*	Lab		24 h			EC50: 0.6 to 4 nM	Contributes to TCDD-like activity of air particulate matter
175	3010	352	Mammalian	Mouse	Hepa lclc7 cells		*In vitro*	Lab		24 h			EC50: 0.3 to 3 nM	Contributes to TCDD-like activity of air particulate matter
175	3011	351	Mammalian	Mouse	Hepa lclc7 cells		*In vitro*	Lab		24 h			EC50: 0.6 to 2 nM	Contributes to TCDD-like activity of air particulate matter
175	3012	346	Mammalian	Mouse	Hepa lclc7 cells		*In vitro*	Lab		24 h			EC50: 42 to 150 nM	Contributes to TCDD-like activity of air particulate matter
175	3013	350	Mammalian	Mouse	Hepa lclc7 cells		*In vitro*	Lab		24 h			EC50: 0.5 to 2 µM	Contributes to TCDD-like activity of air particulate matter
175	3014	347	Mammalian	Mouse	Hepa lclc7 cells		*In vitro*	Lab		24 h			EC50: 0.6 to 7 µM	Contributes to TCDD-like activity of air particulate matter
175	3015	313	Mammalian	Mouse	Hepa lclc7 cells		*In vitro*	Lab		24 h			EC50 = 1E-10 M	
175	3016	477	Mammalian	Mouse	Hepa lclc7 cells		*In vitro*	Lab		24 h				Component of air particulate matter
175	3017	476	Mammalian	Mouse	Hepa lclc7 cells		*In vitro*	Lab		24 h				Component of air particulate matter
175	3018	478	Mammalian	Mouse	Hepa lclc7 cells		*In vitro*	Lab		24 h				Component of air particulate matter
197	3210	377	Mammalian	Mouse	HeLa cells cotransfected with mouse ER		*In vitro*	Lab		24 h			100 nM	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
197	3211	376	Mammalian	Mouse	HeLa cells cotransfected with mouse ER		*In vitro*	Lab		24 h			100 nM	
197	3212	374	Mammalian	Mouse	HeLa cells cotransfected with mouse ER		*In vitro*	Lab		24 h			100 nM	
197	3213	523	Mammalian	Mouse	HeLa cells cotransfected with mouse ER		*In vitro*	Lab		24 h			1 nM	
197	3214	451	Mammalian	Mouse	HeLa cells cotransfected with mouse ER		*In vitro*	Lab		24 h			2 µM	
208	3359	538	Mammalian	Mouse	GR		*In vitro*	Lab		Overnight		4 (on ice)	IC50 = 15 µM	Competition binding study with GR
208	3360	539	Mammalian	Mouse	GR		*In vitro*	Lab		Overnight		4 (on ice)	IC50 = 17 µM	Competition binding study with GR
208	3361	540	Mammalian	Mouse	GR		*In vitro*	Lab		Overnight		4 (on ice)	IC50 = 17 µM	Competition binding study with GR
208	3362	541	Mammalian	Mouse	GR		*In vitro*	Lab		Overnight		4 (on ice)	IC50 = 16-18 µM	Competition binding study with GR
208	3363	542	Mammalian	Mouse	GR		*In vitro*	Lab		Overnight		4 (on ice)	IC50 = 20 µM	Competition binding study with GR
208	3364	543	Mammalian	Mouse	GR		*In vitro*	Lab		Overnight		4 (on ice)	IC50 > 30 µM	Competition binding study with GR
208	3365	544	Mammalian	Mouse	GR		*In vitro*	Lab		Overnight		4 (on ice)	IC50 > 30 µM	Competition binding study with GR

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
208	3366	545	Mammalian	Mouse	GR		*In vitro*	Lab		Overnight		4 (on ice)	IC50 > 30 µM	Competition binding study with GR
240	3723	602	Mammalian	Mouse	PXR		*In vitro*	Lab		36 h			0.01-10 µM	COS-7 cells transfected with PXR expression plasmid; concentration range: 10 pM - 10 µM
240	3724	65	Mammalian	Mouse	PXR		*In vitro*	Lab		36 h			0.01-10 µM	COS-7 cells transfected with PXR expression plasmid; concentration range: 10 pM - 10 µM
240	3728	157	Mammalian	Mouse	PXR		*In vitro*	Lab		36 h			10 pM - 10 µM	COS-7 cells transfected with PXR expression plasmid
240	3729	240	Mammalian	Mouse	PXR		*In vitro*	Lab		36 h			1 µM	COS-7 cells transfected with PXR expression plasmid
263	3820	609	Mammalian	Mouse	Adrenocortical Y1 cells		*In vitro*	Lab		3 h			Ki = 0.04 µM	
263	3821	610	Mammalian	Mouse	Adrenocortical Y1 cells		*In vitro*	Lab		3 h			Ki = 0.8 µM	
263	3822	547	Mammalian	Mouse	Adrenocortical Y1 cells		*In vitro*	Lab		24 h			5-20 µM	
263	3823	241	Mammalian	Mouse	Adrenocortical Y1 cells		*In vitro*	Lab		24 h			20 µM	
263	3824	465	Mammalian	Mouse	Adrenocortical Y1 cells		*In vitro*	Lab		24 h			20 µM	
263	3825	358	Mammalian	Mouse	Adrenocortical Y1 cells		*In vitro*	Lab		24 h			20 µM	
263	3826	393	Mammalian	Mouse	Adrenocortical Y1 cells		*In vitro*	Lab		24 h			30 µM	Technical PCB: 10 µg/ml, which corresponds to 30 µM
263	3827	300	Mammalian	Mouse	Adrenocortical Y1 cells		*In vitro*	Lab		24 h			20 µM	
263	3828	560	Mammalian	Mouse	Adrenocortical Y1 cells		*In vitro*	Lab		24 h			20 µM	
263	3829	292	Mammalian	Mouse	Adrenocortical Y1 cells		*In vitro*	Lab		24 h			20 µM	
263	3830	310	Mammalian	Mouse	Adrenocortical Y1 cells		*In vitro*	Lab		24 h			20 µM	
263	3831	305	Mammalian	Mouse	Adrenocortical Y1 cells		*In vitro*	Lab		24 h			20 µM	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
263	3832	611	Mammalian	Mouse	Adrenocortical Y1 cells		*In vitro*	Lab		24 h			100 µM	
263	3833	349	Mammalian	Mouse	Adrenocortical Y1 cells		*In vitro*	Lab		24 h			100 µM	
263	3834	612	Mammalian	Mouse	Adrenocortical Y1 cells		*In vitro*	Lab		24 h			100 µM	
263	3835	350	Mammalian	Mouse	Adrenocortical Y1 cells		*In vitro*	Lab		24 h			100 µM	
263	3836	478	Mammalian	Mouse	Adrenocortical Y1 cells		*In vitro*	Lab		24 h			100 µM	
263	3837	613	Mammalian	Mouse	Adrenocortical Y1 cells		*In vitro*	Lab		24 h			100 µM	
263	3838	347	Mammalian	Mouse	Adrenocortical Y1 cells		*In vitro*	Lab		24 h			100 µM	
263	3839	614	Mammalian	Mouse	Adrenocortical Y1 cells		*In vitro*	Lab		24 h			100 µM	
263	3840	541	Mammalian	Mouse	Adrenocortical Y1 cells		*In vitro*	Lab		24 h			20 µM	
263	3841	538	Mammalian	Mouse	Adrenocortical Y1 cells		*In vitro*	Lab		24 h			10 µM	
263	3842	618	Mammalian	Mouse	Adrenocortical Y1 cells		*In vitro*	Lab		24 h			20 µM	
263	3843	619	Mammalian	Mouse	Adrenocortical Y1 cells		*In vitro*	Lab		24 h			10 µM	
263	3844	620	Mammalian	Mouse	Adrenocortical Y1 cells		*In vitro*	Lab		24 h			20 µM	
263	3845	621	Mammalian	Mouse	Adrenocortical Y1 cells		*In vitro*	Lab		24 h			20 µM	
263	3846	622	Mammalian	Mouse	Adrenocortical Y1 cells		*In vitro*	Lab		24 h			10 µM	
263	3847	545	Mammalian	Mouse	Adrenocortical Y1 cells		*In vitro*	Lab		24 h			20 µM	
263	3848	544	Mammalian	Mouse	Adrenocortical Y1 cells		*In vitro*	Lab		24 h			20 µM	
263	3849	623	Mammalian	Mouse	Adrenocortical Y1 cells		*In vitro*	Lab		24 h			20 µM	
263	3850	624	Mammalian	Mouse	Adrenocortical Y1 cells		*In vitro*	Lab		24 h			20 µM	
263	3851	543	Mammalian	Mouse	Adrenocortical Y1 cells		*In vitro*	Lab		24 h			20 µM	
263	3852	627	Mammalian	Mouse	Adrenocortical Y1 cells		*In vitro*	Lab		24 h			20 µM	
263	3853	546	Mammalian	Mouse	Adrenocortical Y1 cells		*In vitro*	Lab		24 h			20 µM	
263	3854	628	Mammalian	Mouse	Adrenocortical Y1 cells		*In vitro*	Lab		24 h			20 µM	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
263	3855	615	Mammalian	Mouse	Adrenocortical Y1 cells		*In vitro*	Lab		24 h			10-20 µM	
263	3856	616	Mammalian	Mouse	Adrenocortical Y1 cells		*In vitro*	Lab		24 h			10-20 µM	
263	3857	540	Mammalian	Mouse	Adrenocortical Y1 cells		*In vitro*	Lab		24 h			20 µM	
263	3858	617	Mammalian	Mouse	Adrenocortical Y1 cells		*In vitro*	Lab		24 h			10 µM	
263	3859	539	Mammalian	Mouse	Adrenocortical Y1 cells		*In vitro*	Lab		24 h			20 µM	
263	3860	542	Mammalian	Mouse	Adrenocortical Y1 cells		*In vitro*	Lab		24 h			20 µM	
263	3861	625	Mammalian	Mouse	Adrenocortical Y1 cells		*In vitro*	Lab		24 h			20 µM	
263	3862	626	Mammalian	Mouse	Adrenocortical Y1 cells		*In vitro*	Lab		24 h			20 µM	
263	3863	629	Mammalian	Mouse	Adrenocortical Y1 cells		*In vitro*	Lab		24 h			20 µM	
37	4066	413	Mammalian	Mouse	ER		*In vitro*	Lab		28 h			1-1000 nM	HeLa cells transfected with mouse ER
37	4067	423	Mammalian	Mouse	ER		*In vitro*	Lab		28 h			1-1000 nM	HeLa cells transfected with mouse ER
37	4068	383	Mammalian	Mouse	ER		*In vitro*	Lab		28 h			0.01-10 nM	HeLa cells transfected with mouse ER
37	4069	355	Mammalian	Mouse	ER		*In vitro*	Lab		28 h			0.1-1000 nM	HeLa cells transfected with mouse ER
37	4070	354	Mammalian	Mouse	ER		*In vitro*	Lab		28 h			0.1-1 µM	HeLa cells transfected with mouse ER
37	4071	226	Mammalian	Mouse	ER		*In vitro*	Lab		28 h			0.1-10 µM	HeLa cells transfected with mouse ER
37	4072	278	Mammalian	Mouse	ER		*In vitro*	Lab		28 h			0.1-5 µM	HeLa cells transfected with mouse ER
37	4073	242	Mammalian	Mouse	ER		*In vitro*	Lab		28 h			2-10 µM	HeLa cells transfected with mouse ER
37	4074	230	Mammalian	Mouse	ER		*In vitro*	Lab		28 h			0.1-10 µM	HeLa cells transfected with mouse ER
307	4184	675	Mammalian	Mouse	Hepa 1c1c7 cells		*In vitro*	Lab		24 h		37	EC50 = 26 ng/l	
307	4185	313	Mammalian	Mouse	Hepa 1c1c7 cells		*In vitro*	Lab		24 h		37	EC50 = 18 ng/l	Equivalent to 55 pM
307	4187	675	Mammalian	Mouse	Liver	Mature and immature	*In vivo*	Lab		4 d	Oral	20-22	10-100 mg/kg	
311	4231	677	Mammalian	Mouse	HeLa cells		*In vitro*	Lab		40 h		37	100 nM - 10 µM	Cells transfected with hERalpha

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
311	4232	390	Mammalian	Mouse	HeLa cells		*In vitro*	Lab		40 h		37	100 nM - 10 µM	Cells transfected with hERalpha
311	4233	678	Mammalian	Mouse	HeLa cells		*In vitro*	Lab		40 h		37	100 nM - 10 µM	Cells transfected with hERalpha
311	4234	679	Mammalian	Mouse	HeLa cells		*In vitro*	Lab		40 h		37	100 nM - 10 µM	Cells transfected with hERalpha
311	4235	680	Mammalian	Mouse	HeLa cells		*In vitro*	Lab		40 h		37	100 nM - 10 µM	Cells transfected with hERalpha
311	4236	681	Mammalian	Mouse	HeLa cells		*In vitro*	Lab		40 h		37	100 nM - 10 µM	Cells transfected with hERalpha
311	4237	682	Mammalian	Mouse	HeLa cells		*In vitro*	Lab		40 h		37	100 nM - 10 µM	Cells transfected with hERalpha
311	4238	683	Mammalian	Mouse	HeLa cells		*In vitro*	Lab		40 h		37	100 nM - 10 µM	Cells transfected with hERalpha
311	4247	383	Mammalian	Mouse	HeLa cells		*In vitro*	Lab		40 h		37	0.01-1000 nM	Cells transfected with hERalpha
311	4248	65	Mammalian	Mouse	HeLa cells		*In vitro*	Lab		40 h		37	0.01-10 µM	Cells transfected with hERalpha; dose range: 0.01-50 µM
311	4252	423	Mammalian	Mouse	HeLa cells		*In vitro*	Lab		40 h		37	0.01-10 µM	Cells transfected with hERalpha
355	4434	278	Mammalian	Mouse	HeLa cells		*In vitro*	Lab		16 h			0.1 nM - 10 µM	HeLa cells transfected with ERalpha and ERbeta, respectively
355	4435	65	Mammalian	Mouse	HeLa cells		*In vitro*	Lab		16 h			0.1 nM - 10 µM	HeLa cells transfected with ERalpha and ERbeta, respectively
355	4436	415	Mammalian	Mouse	HeLa cells		*In vitro*	Lab		16 h			0.1 nM - 10 µM	HeLa cells transfected with ERalpha and ERbeta, respectively
355	4437	358	Mammalian	Mouse	HeLa cells		*In vitro*	Lab		16 h			0.1 nM - 10 µM	HeLa cells transfected with ERalpha and ERbeta, respectively
355	4438	313	Mammalian	Mouse	HeLa cells		*In vitro*	Lab		16 h			0.1 nM - 1 µM	HeLa cells transfected with ERalpha and ERbeta, respectively
355	4440	464	Mammalian	Mouse	HeLa cells		*In vitro*	Lab		16 h				Sewage treatment works influent and effluent; HeLa cells transfected with ERalpha and ERbeta, respectively
55	2555	230	Mammalian	Mouse, female	Uterus	7-9 w	*In vivo*	Lab		4-6 h	Subcutaneous		7.5 mg/kg body weight	Mice were ovariectomized 10 days before treatment.

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
150	2779	269	Mammalian	Mouse, female		Adult	*In vivo*	Lab		3 d	Intraperitoneal		500-1000 mg/kg/d	
5	2469	221	Mammalian	Mouse, male	Testis		*In vivo*	Lab			Oral		LOEL = 1000 mg/kg/d	
67	2781	275	Mammalian	Mouse, male		Adult	*In vivo*	Lab		21 d			30 mg/kg body weight/d	
295	4113	628	Mammalian	Mustela vison (Mink), female			*In vivo*	Lab		1 year	Food		mean: 4.3 µg/mink/d	Environmental relevant mixture of 3-MeSO2-DDE and 15 MeSO2-PCBs; feed ration 3 times weekly
295	4114	619	Mammalian	Mustela vison (Mink), female			*In vivo*	Lab		1 year	Food		mean: 4.6 µg/mink/d	Environmental relevant mixture of 3-MeSO2-DDE and 15 MeSO2-PCBs; feed ration 3 times weekly
295	4116	543	Mammalian	Mustela vison (Mink), female			*In vivo*	Lab		1 year	Food		mean: 2.8 µg/mink/d	Environmental relevant mixture of 3-MeSO2-DDE and 15 MeSO2-PCBs; feed ration 3 times weekly
295	4117	626	Mammalian	Mustela vison (Mink), female			*In vivo*	Lab		1 year	Food		mean: 1.1 µg/mink/d	Environmental relevant mixture of 3-MeSO2-DDE and 15 MeSO2-PCBs; feed ration 3 times weekly
295	4118	546	Mammalian	Mustela vison (Mink), female			*In vivo*	Lab		1 year	Food		mean: 23.8 µg/mink/d	Environmental relevant mixture of 3-MeSO2-DDE and 15 MeSO2-PCBs; feed ration 3 times weekly
295	4119	621	Mammalian	Mustela vison (Mink), female			*In vivo*	Lab		1 year	Food		mean: 8.3 µg/mink/d	Environmental relevant mixture of 3-MeSO2-DDE and 15 MeSO2-PCBs; feed ration 3 times weekly
295	4120	547	Mammalian	Mustela vison (Mink), female			*In vivo*	Lab		1 year	Food		mean: 7.6 µg/mink/d	Environmental relevant mixture of 3-MeSO2-DDE and 15 MeSO2-PCBs; feed ration 3 times weekly
295	4121	625	Mammalian	Mustela vison (Mink), female			*In vivo*	Lab		1 year	Food		mean: 8.6 µg/mink/d	Environmental relevant mixture of 3-MeSO2-DDE and 15 MeSO2-PCBs; feed ration 3 times weekly

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
295	4122	623	Mammalian	Mustela vison (Mink), female			*In vivo*	Lab		1 year	Food		mean: 0.4 µg/mink/d	Environmental relevant mixture of 3-MeSO2-DDE and 15 MeSO2-PCBs; feed ration 3 times weekly
295	4123	545	Mammalian	Mustela vison (Mink), female			*In vivo*	Lab		1 year	Food		mean: 4.3 µg/mink/d	Environmental relevant mixture of 3-MeSO2-DDE and 15 MeSO2-PCBs; feed ration 3 times weekly
295	4124	616	Mammalian	Mustela vison (Mink), female			*In vivo*	Lab		1 year	Food		mean: 6.3 µg/mink/d	Environmental relevant mixture of 3-MeSO2-DDE and 15 MeSO2-PCBs; feed ration 3 times weekly
295	4125	617	Mammalian	Mustela vison (Mink), female			*In vivo*	Lab		1 year	Food		mean: 12 µg/mink/d	Environmental relevant mixture of 3-MeSO2-DDE and 15 MeSO2-PCBs; feed ration 3 times weekly
295	4126	538	Mammalian	Mustela vison (Mink), female			*In vivo*	Lab		1 year	Food		mean: 6.4 µg/mink/d	Environmental relevant mixture of 3-MeSO2-DDE and 15 MeSO2-PCBs; feed ration 3 times weekly
295	4127	544	Mammalian	Mustela vison (Mink), female			*In vivo*	Lab		1 year	Food		mean: 2.4 µg/mink/d	Environmental relevant mixture of 3-MeSO2-DDE and 15 MeSO2-PCBs; feed ration 3 times weekly
295	4128	540	Mammalian	Mustela vison (Mink), female			*In vivo*	Lab		1 year	Food		mean: 6.4 µg/mink/d	Environmental relevant mixture of 3-MeSO2-DDE and 15 MeSO2-PCBs; feed ration 3 times weekly
230	3547	250	Mammalian	Mustela vison (Mink)			*In vivo*	Lab		Multi-g study	Food		1 mg/kg/d	Exposure from conception to maturity
230	3548	366	Mammalian	Mustela vison (Mink)			*In vivo*	Lab		Multi-g study	Food		0.05 mg/kg/d	Exposure from conception to maturity
230	3549	356	Mammalian	Mustela vison (Mink)			*In vivo*	Lab		Multi-g study	Food		1 mg/kg/d	Exposure from conception to maturity
295	4115	615	Mammalian	Mustela vison (Mink), female			*In vivo*	Lab		1 year	Food		mean: 0.7 µg/mink/d	Environmental relevant mixture of 3-MeSO2-DDE and 15 MeSO2-PCBs; feed ration 3 times weekly

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
144	2769	265	Mammalian	New Zealand White rabbit, male		12 m	*In vivo*	Lab		5 d	Subcutaneous		45 mg/kg body weight/ d	Concentration range: 15-45 mg/kg/day; endpoints measured until 12 weeks postdosing
96	2651	248	Mammalian	New Zealand white rabbits, male			*In vivo*	Lab		90 d	Food		0.3 and 0.6 %	Exact intake was not measured
20	2489	223	Mammalian	Osborne-Mendel rat		5 w	*In vivo*	Lab			Food		LOEL = 121-203 mg/kg	
354	4428	358	Mammalian	Peromyscus maniculatus (Deer mouse)		Prepubescent (35-42 d)	*In vivo*	Lab		4 d	Oral		0.1-10 mg/kg	Dosing an days 1 and 2
76	2595	240	Mammalian	Phocoenoides dalli (Dall's porpoise)			*In vivo*	Field			Environmental contamination			Technical DDT (clofenotane)
67	2783	275	Mammalian	Pig, male			*In vivo*	Lab		90 d			50 mg/kg body weight/d	
266	3867	313	Mammalian	Porc	Preovulatory follicles	Prepubertal	*In vitro*	Lab		96 h			3.2 ng/ g tissue	Dose equivalent to 10 nM; pro-oestrous ovaries containing large vascular follicles and corpora lutea albicantia
266	3868	313	Mammalian	Porc	Preovulatory follicles	Prepubertal	*In vitro*	Lab		24 h			3.2 ng/ g tissue	Dose equivalent to 10 nM; pro-oestrous ovaries containing large vascular follicles and corpora lutea albicantia
245	3750	313	Mammalian	Porc, female	Luteal cells		*In vitro*	Lab		24-72 h			0.1-100 nM	Luteal cells from mature corpora lutea (8-10 days after ovulation)
24	2738	260	Mammalian	Rabbit	Uterus	Juvenile	*In vitro*	Lab					100 µM	
200	3261	382	Mammalian	Rabbit	ER		*In vitro*	Lab		18-20 h		4	IC50 = 2 pM	Estrogen receptor binding assay
200	3262	383	Mammalian	Rabbit	ER		*In vitro*	Lab		18-20 h		4	IC50 = 7 fM	Estrogen receptor binding assay
200	3263	413	Mammalian	Rabbit	ER		*In vitro*	Lab		18-20 h		4	IC50 = 0.12 µM	Estrogen receptor binding assay
200	3264	157	Mammalian	Rabbit	ER		*In vitro*	Lab		18-20 h		4	IC50 = 1.6 µM	Estrogen receptor binding assay
200	3265	528	Mammalian	Rabbit	ER		*In vitro*	Lab		18-20 h		4	IC50 = 4.3 µM	Estrogen receptor binding assay
200	3266	65	Mammalian	Rabbit	ER		*In vitro*	Lab		18-20 h		4	IC50 = 1.8 µM	Estrogen receptor binding assay

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
200	3267	355	Mammalian	Rabbit	ER		*In vitro*	Lab		18-20 h		4	IC50 = 6.5 µM	Estrogen receptor binding assay
200	3268	242	Mammalian	Rabbit	ER		*In vitro*	Lab		18-20 h		4	IC50 = 3.4 µM	Estrogen receptor binding assay
200	3270	532	Mammalian	Rabbit	ER		*In vitro*	Lab		18-20 h		4	IC50 = 4 pM	Estrogen receptor binding assay
24	2501	225	Mammalian	Rabbit, female	Uterus	juvenile	*In vitro*	Lab					100 µM	
79	2599	240	Mammalian	Rabbit, female		Adult	*In vivo*	Lab		12-15 w	Oral, 3 times weekly		3 mg/kg body weight	
24	2602	241	Mammalian	Rabbit, female	Uterus	Juvenile	*In vitro*	Lab					100 µM	
24	2658	250	Mammalian	Rabbit, female	Uterus	Juvenile	*In vitro*	Lab					100 µM	
79	2666	250	Mammalian	Rabbit, female		Adult	*In vivo*	Lab		12-15 w	Oral		LOEL = 0.8mg/kg body weight	
24	3070	355	Mammalian	Rabbit, female	Uterus	Juvenile	*In vitro*	Lab					100 µM	
24	3071	242	Mammalian	Rabbit, female	Uterus	Juvenile	*In vitro*	Lab					100 µM	
24	3072	356	Mammalian	Rabbit, female	Uterus	Juvenile	*In vitro*	Lab					100 µM	
24	3073	278	Mammalian	Rabbit, female	Uterus	Juvenile	*In vitro*	Lab					100 µM	
24	3074	358	Mammalian	Rabbit, female	Uterus	Juvenile	*In vitro*	Lab					100 µM	
24	3075	488	Mammalian	Rabbit, female	Uterus	Juvenile	*In vitro*	Lab					100 µM	
248	3764	358	Mammalian	Rabbit, female	PR	Adult	*In vitro*	Lab					1.1-110 µM	Progesterone receptor assay; Cytoplasmatic PR in the uterine mucosa
248	3765	415	Mammalian	Rabbit, female	PR	Adult	*In vitro*	Lab					11-110 µM	Progesterone receptor assay; Cytoplasmatic PR in the uterine mucosa; concentration range: 1.1-110 µM
248	3766	301	Mammalian	Rabbit, female	PR	Adult	*In vitro*	Lab					110 µM	Progesterone receptor assay; Cytoplasmatic PR in the uterine mucosa; concentration range: 1.1-110 µM

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
248	3767	223	Mammalian	Rabbit, female	PR	Adult	*In vitro*	Lab					110 µM	Progesterone receptor assay; Cytoplasmatic PR in the uterine mucosa; concentration range: 1.1-110 µM
4	2468	221	Mammalian	Rat			*In vivo*	Lab			Oral		LOEL = 50 mg/kg/d	
6	2470	221	Mammalian	Rat			*In vivo*	Lab			Oral		LOEL = 200 mg/kg	
23	2496	233	Mammalian	Rat			*In vivo*	Lab					NOEL = 25 mg/kg	Chlordane containing both cis- and trans-isomer
23	2497	234	Mammalian	Rat			*In vivo*	Lab					NOEL = 25 mg/kg	Chlordane containing both cis- and trans-isomer
23	2509	225	Mammalian	Rat			*In vivo*	Lab					NOEL = 3 mg/kg	
29	2510	225	Mammalian	Rat			*In vivo*	Lab					NAOEL = 0.1 mg/kg/d	
38	2524	226	Mammalian	Rat			*In vivo*	Lab		30 d	Food		7.5-10 µg/kg/d	
57	2562	231	Mammalian	Rat			*In vivo*	Lab		Oral, days 7-16 of gestation and postpartum			7 mg/kg/d	
58	2563	231	Mammalian	Rat		Immature, 28 d	*In vivo*	Lab			Injection		0.4-50 mg/l	Single dose per animal
63	2570	231	Mammalian	Rat		Adult and neonatal	*In vivo*	Lab			Food		LOEL = 25 mg/kg	
65	2574	232	Mammalian	Rat	Thyroid		*In vivo*	Lab						
23	2581	236	Mammalian	Rat			*In vivo*	Lab					NOEL = 25 mg/kg	
67	2582	236	Mammalian	Rat	Thyroid		*In vivo*	Lab		80 w			556-1112 mg/kg (males); 540-1080 mg/kg (females)	
67	2600	243	Mammalian	Rat			*In vivo*	Lab		2 genera-tions			LOEL = 2.5 mg/kg body weight/d	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
81	2608	242	Mammalian	Rat		21-23 d	*In vivo*	Lab		18 h	Subcutaneous		LOEL = 4 mg/animal	
91	2629	246	Mammalian	Rat			*In vivo*	Lab		13 w	Food		NOEL = 80 ppm	Dose equivalent to 5 mg/kg body weight/day
91	2630	246	Mammalian	Rat			*In vivo*	Lab		13 w	Food		NOEL = 400 ppm	
91	2632	246	Mammalian	Rat			*In vivo*	Lab		31 m	Food		1000 ppm	Dose equivalent to 67 mg/kg body weight/day
91	2633	246	Mammalian	Rat			*In vivo*	Lab		2 g	Food		300 ppm	Dose equivalent to 22.4 mg/kg body weight/day
91	2643	248	Mammalian	Rat			*In vivo*	Lab		6 w	Food		NOEL = 500 ppm	Dose equivalent to 25 mg/kg body weight/day
91	2644	248	Mammalian	Rat			*In vivo*	Lab		4 w	Food		NOEL = 250 mg/kg body weight/d	
91	2646	248	Mammalian	Rat			*In vivo*	Lab		2 y	Food		LOEL = 500 ppm	
91	2647	248	Mammalian	Rat			*In vivo*	Lab			Food		LOEL > 50 mg/kg body weight/d	Concentration range: 50-960 mg/kg/day
91	2649	248	Mammalian	Rat			*In vivo*	Lab			Maternal transfer		NOEL = 630 mg/kg body weight/d	Maternally toxic dose: 2000 mg/kg/day
108	2678	250	Mammalian	Rat			*In vivo*	Lab		3-g	Oral		NOEL = 5 mg/kg body weight/d	
108	2679	250	Mammalian	Rat			*In vivo*	Lab		3-g	Oral		LOEL = 2.5 mg/kg body weight/d	
132	2727	257	Mammalian	Rat		Preweanling pups	*In vivo*	Lab		Postnatal day 5-20	Subcutaneous		LOEL = 1.3 mg/kg body weight/d	Concentration range: 1.3 and 1.9 mg/kg/day
67	2729	259	Mammalian	Rat	Thyroid		*In vivo*	Lab		6-13 w	Injection		NOEL = 2 ppm	Dose equivalent to 0.1 mg/kg body weight/day
67	2732	259	Mammalian	Rat	Thyroid		*In vivo*	Lab		24 m	Food		100 ppm	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
135	2736	259	Mammalian	Rat	Thyroid		*In vivo*	Lab		Multi-generation study	Food		LOEL = 100 mg/kg/d	Dosing 61 and 173 days before mating; concentrations: 25 and 100 mg/kg/day
67	2744	260	Mammalian	Rat	Pituitary		*In vivo*	Lab		7 d			120 mg/kg body weight/d	
67	2745	260	Mammalian	Rat		Prenatal	*In vivo*	Lab			Subcutaneous		16 mg/kg bodyweight	
67	2761	264	Mammalian	Rat			*In vivo*	Lab		3-g reproduction study	Food		3-30 mg/kg body weight/d	
67	2784	275	Mammalian	Rat			*In vivo*	Lab		4-g reproduction study			4 mg/kg body weight/d	
153	2787	275	Mammalian	Rat			*In vivo*	Lab		6 w	Food		500 ppm	
160	2823	277	Mammalian	Rat		Prepubertal	*In vivo*	Lab			Parenteral administration		LOEL = 30 mg/animal	
209	3367	377	Mammalian	Rat	RUCA-I cells		*In vitro*	Lab		18 h		4	1 nM - 10 µM	Competitive ligand-binding assay
209	3368	376	Mammalian	Rat	RUCA-I cells		*In vitro*	Lab		18 h		4	1 nM - 10 µM	Competitive ligand-binding assay
209	3369	444	Mammalian	Rat	RUCA-I cells		*In vitro*	Lab		18 h		4	1 nM - 10 µM	Competitive ligand-binding assay
209	3370	548	Mammalian	Rat	RUCA-I cells		*In vitro*	Lab		18 h		4	1 nM - 10 µM	Competitive ligand-binding assay
209	3371	377	Mammalian	Rat	RUCA-I cells		*In vitro*	Lab		56 h			0.01-1 µM	
209	3372	376	Mammalian	Rat	RUCA-I cells		*In vitro*	Lab		56 h			1 µM	Concentration range: 0.01-1 µM
209	3373	444	Mammalian	Rat	RUCA-I cells		*In vitro*	Lab		56 h			1 µM	Concentration range: 0.01-1 µM
209	3374	548	Mammalian	Rat	RUCA-I cells		*In vitro*	Lab		56 h			0.01-1 µM	
216	3391	380	Mammalian	Rat	ERbeta		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
216	3393	379	Mammalian	Rat	ERbeta		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
216	3395	378	Mammalian	Rat	ERbeta		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
216	3397	553	Mammalian	Rat	ERbeta		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
216	3399	554	Mammalian	Rat	ERbeta		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
216	3401	555	Mammalian	Rat	ERbeta		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
216	3403	556	Mammalian	Rat	ERbeta		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
216	3405	557	Mammalian	Rat	ERbeta		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
216	3407	413	Mammalian	Rat	ERbeta		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
216	3409	423	Mammalian	Rat	ERbeta		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
216	3411	558	Mammalian	Rat	ERbeta		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
216	3413	377	Mammalian	Rat	ERbeta		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
216	3415	376	Mammalian	Rat	ERbeta		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
216	3417	523	Mammalian	Rat	ERbeta		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
216	3419	559	Mammalian	Rat	ERbeta		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
216	3421	157	Mammalian	Rat	ERbeta		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
216	3423	355	Mammalian	Rat	ERbeta		*In vitro*	Lab						QSAR based on CoMFA; observed log RBA 17-beta-estradiol: 2
236	3702	157	Mammalian	Rat	ER		*In vitro*	Lab					IC50 = 10 µM	Ligand competition binding assay; cytosolic ER of MtT/E-2 cells
236	3703	355	Mammalian	Rat	ER		*In vitro*	Lab					IC50 = 100 µM	Ligand competition binding assay; cytosolic ER of MtT/E-2 cells
236	3704	601	Mammalian	Rat	ER		*In vitro*	Lab					10 nM - 1 mM	Ligand competition binding assay; cytosolic ER of MtT/E-2 cells
236	3705	388	Mammalian	Rat	ER		*In vitro*	Lab					10 nM - 1 mM	Ligand competition binding assay; cytosolic ER of MtT/E-2 cells
236	3706	157	Mammalian	Rat	MtT/E-2 cells		*In vitro*	Lab		1 week			1-10 µM	Rat pituitary tumor cell line; concentration range: 1 nM - 10 µM
236	3707	355	Mammalian	Rat	MtT/E-2 cells		*In vitro*	Lab		1 week			100 µM	Rat pituitary tumor cell line; concentration range: 0.01-100 µM
236	3708	465	Mammalian	Rat	MtT/E-2 cells		*In vitro*	Lab		1 week			100 µM	Rat pituitary tumor cell line; concentration range: 0.01-100 µM
236	3709	388	Mammalian	Rat	MtT/E-2 cells		*In vitro*	Lab		1 week			100 µM	Rat pituitary tumor cell line; concentration range: 0.01-100 µM
236	3710	601	Mammalian	Rat	MtT/E-2 cells		*In vitro*	Lab		1 week			0.01-100 µM	Rat pituitary tumor cell line
236	3711	157	Mammalian	Rat	MtT/E-2 cells		*In vitro*	Lab		24 h			1-100 µM	Rat pituitary tumor cell line; concentration range: 0.1-100 µM
236	3712	355	Mammalian	Rat	MtT/E-2 cells		*In vitro*	Lab		24 h			10-100 µM	Rat pituitary tumor cell line; concentration range: 0.1-100 µM
236	3713	465	Mammalian	Rat	MtT/E-2 cells		*In vitro*	Lab		24 h			10 µM	Rat pituitary tumor cell line; concentration range: 0.1-100 µM
236	3714	388	Mammalian	Rat	MtT/E-2 cells		*In vitro*	Lab		24 h			100 µM	Rat pituitary tumor cell line; concentration range: 0.1-100 µM

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
236	3715	601	Mammalian	Rat	MtT/E-2 cells		*In vitro*	Lab		24 h			0.1-100 µM	Rat pituitary tumor cell line
254	3793	157	Mammalian	Rat	ERalpha		*In vitro*	Lab		24 h			EC50 = 210 nM	Human HepG2 hepatoma cells transfected with rat Eralpha
316	4279	260	Mammalian	Rat	PC12 cells		*In vitro*	Lab		6-24 h			12.5-200 µM	Rat adrenal pheochromocytoma cellc
316	4280	261	Mammalian	Rat	PC12 cells		*In vitro*	Lab		6-24 h			50-200 µM	Rat adrenal pheochromocytoma cellc; dose range: 12.5-200 µM
316	4281	485	Mammalian	Rat	PC12 cells		*In vitro*	Lab		6-48 h			25-400 µM	Rat adrenal pheochromocytoma cellc
414	4731	125	Mammalian	Rat	C6 glioma cells		*In vitro*	Lab		24 h			10 µM	Competitive whole cell binding assay
414	4732	125	Mammalian	Rat	C6 glioma cells		*In vitro*	Lab		48 h			10 µM	
13	2480	222	Mammalian	Rat, female	Uterus		*In vivo*	Lab			Subcutaneous		up to 1000 mg/kg	
13	2507	225	Mammalian	Rat, female	Uterus	Neonatal	*In vivo*	Lab			Subcutaneous		up to 1000 mg/kg	
13	2556	230	Mammalian	Rat, female	Uterus	Neonatal	*In vivo*	Lab			Subcutaneous		LOEL = 0.2 mg	Treatment on 2nd and 3rd day of life
13	2557	230	Mammalian	Rat, female	Uterus	22 d	*In vivo*	Lab			Oral		LOEL = 10 mg/kg	
13	2560	231	Mammalian	Rat, female	Uterus	Neonatal	*In vivo*	Lab			Subcutaneous		100 mg/kg	Treatment on 2nd and 3rd day of life
13	2561	231	Mammalian	Rat, female		Neonatal	*In vivo*	Lab			Subcutaneous		NOEL = 1 mg/kg	Treatment on 2nd and 3rd day of life
134	2733	259	Mammalian	Rat, female	Thyroid	Weanling	*In vivo*	Lab		83 d	Food		0.1%	
134	2734	408	Mammalian	Rat, female	Thyroid	Weanling	*In vivo*	Lab		83 d	Food		0.1%	
134	2735	409	Mammalian	Rat, female	Thyroid	Weanling	*In vivo*	Lab		83 d	Food		1%	
67	2747	260	Mammalian	Rat, female			*In vivo*	Lab		2 y	Food		25-50 mg/kg body weight/d	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
231	3591	579	Mammalian	Rat, female	ER	Immature	*In vitro*	Lab		16 h		0-4		Competitive binding assay
231	3592	157	Mammalian	Rat, female	ER	Immature	*In vitro*	Lab		16 h		0-4		Competitive binding assay
231	3593	528	Mammalian	Rat, female	ER	Immature	*In vitro*	Lab		16 h		0-4		Competitive binding assay
231	3594	580	Mammalian	Rat, female	ER	Immature	*In vitro*	Lab		16 h		0-4		Competitive binding assay
231	3595	581	Mammalian	Rat, female	ER	Immature	*In vitro*	Lab		16 h		0-4		Competitive binding assay
231	3596	582	Mammalian	Rat, female	ER	Immature	*In vitro*	Lab		16 h		0-4		Competitive binding assay
231	3597	583	Mammalian	Rat, female	ER	Immature	*In vitro*	Lab		16 h		0-4		Competitive binding assay
231	3598	584	Mammalian	Rat, female	ER	Immature	*In vitro*	Lab		16 h		0-4		Competitive binding assay
231	3599	585	Mammalian	Rat, female	ER	Immature	*In vitro*	Lab		16 h		0-4		Competitive binding assay
231	3600	586	Mammalian	Rat, female	ER	Immature	*In vitro*	Lab		16 h		0-4		Competitive binding assay
231	3601	587	Mammalian	Rat, female	ER	Immature	*In vitro*	Lab		16 h		0-4		Competitive binding assay
231	3602	588	Mammalian	Rat, female	ER	Immature	*In vitro*	Lab		16 h		0-4		Competitive binding assay
231	3603	589	Mammalian	Rat, female	ER	Immature	*In vitro*	Lab		16 h		0-4		Competitive binding assay
231	3604	590	Mammalian	Rat, female	ER	Immature	*In vitro*	Lab		16 h		0-4		Competitive binding assay
231	3616	592	Mammalian	Rat, female	ER	Immature	*In vitro*	Lab		16 h		0-4	10 pM - 100 µM	Competitive binding assay
231	3617	593	Mammalian	Rat, female	ER	Immature	*In vitro*	Lab		16 h		0-4	10 pM - 100 µM	Competitive binding assay
231	3618	594	Mammalian	Rat, female	ER	Immature	*In vitro*	Lab		16 h		0-4	10 pM - 100 µM	Competitive binding assay
231	3619	591	Mammalian	Rat, female	ER	Immature	*In vitro*	Lab		16 h		0-4	10 pM - 100 µM	Competitive binding assay
1	2461	221	Mammalian	Rat, male	Testis/ prostate		*In vivo*	Lab			Intratesticular and intraperito-neal injection		0.25 mg	
1	2463	221	Mammalian	Rat, male	Testis/ prostate		*In vitro*	Lab					IC50 = 5 µM	
3	2466	221	Mammalian	Rat, male			*In vivo*	Lab			Oral		LOEL = 200 mg/kg/d	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
59	2564	231	Mammalian	Rat, male	Thyroid		*In vivo*	Lab		28 d exposure, 18 m recovery	Food		5-50 mg/kg	
59	2575	235	Mammalian	Rat, male	Thyroid		*In vivo*	Lab	28 d exposure, 18 m recovery		Food		0.05-50 mg/kg	
80	2605	358	Mammalian	Rat, male		Adult and pubertal	*In vivo*	Lab					EC50 = 75 µM	
100	2667	250	Mammalian	Rat, male		Mature	*In vivo*	Lab		45 d	Intraperitoneal		4 mg/kg/d	
100	2668	250	Mammalian	Rat, male		Mature	*In vivo*	Lab		45 d	Intraperitoneal		8 mg/kg/d	
67	2746	260	Mammalian	Rat, male			*In vivo*	Lab		2 y	Food		25 mg/kg body weight/d	
67	2782	275	Mammalian	Rat, male		Adult	*In vivo*	Lab		5 d			250 mg/kg body weight/d	
104	2673	250	Mammalian	Rat, male offspring			*In vivo*	Lab			Mother milk		6 mg/kg	Single dose to mother on day 9 or 14 of lactation
104	2674	250	Mammalian	Rat, male offspring			*In vivo*	Lab			Mother milk		1 mg/kg	To mother on days 9 to 14 of lactation
69	2585	238	Mammalian	Rat, pregnant female			*In vivo*	Lab			Drinking water		1000 ppm	Exposure through gestation and 10 months following partuition and to offspring for up to 2 years after weaning
327	4300	285	Mammalian	Sprague-Dawley CD rat		Prenatal	*In vivo*	Lab		Gestation day 12-21	In utero	18-26	LOAEL = 100 mg/kg/d	Dose range: 0.5-500 mg/kg/day; NOAEL = 50 mg/kg/day
24	2603	241	Mammalian	Sprague-Dawley rat	Epididymis	Adult	*In vitro*	Lab					100 µM	
24	2604	241	Mammalian	Sprague-Dawley rat	Prostate	21 d	*In vitro*	Lab					100 µM	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
24	2659	250	Mammalian	Sprague-Dawley rat	Epididymis	Adult	*In vitro*	Lab					NOEL = 100 µM	
24	2662	241	Mammalian	Sprague-Dawley rat	Prostate	21 d	*In vitro*	Lab					100 µM	
24	2739	260	Mammalian	Sprague-Dawley rat	Epididymis	Adult	*In vitro*	Lab					100 µM	
24	2740	260	Mammalian	Sprague-Dawley rat	Prostate	21 d	*In vitro*	Lab					100 µM	
137	2749	260	Mammalian	Sprague-Dawley rat		Females with regular 4-day cycles	*In vivo*	Lab		21 d	Oral		75-300 mg/kg/d	
155	2790	275	Mammalian	Sprague-Dawley rat			*In vivo*	Lab		2-g study	Food		40 ppm	Concentration range: 0.32-40 ppm
176	3019	345	Mammalian	Sprague-Dawley rat			*In vivo*	Lab		up to16 w	Drinking water	20	10 ppm	
24	3076	358	Mammalian	Sprague-Dawley rat	Prostate	21 d	*In vitro*	Lab					100 µM	
24	3077	242	Mammalian	Sprague-Dawley rat	Prostate	21 d	*In vitro*	Lab					100 µM	
24	3078	488	Mammalian	Sprague-Dawley rat	Prostate	21 d	*In vitro*	Lab					100 µM	
24	3079	356	Mammalian	Sprague-Dawley rat	Prostate	21 d	*In vitro*	Lab					100 µM	
24	3080	278	Mammalian	Sprague-Dawley rat	Prostate	21 d	*In vitro*	Lab					100 µM	
24	3081	355	Mammalian	Sprague-Dawley rat	Prostate	21 d	*In vitro*	Lab					100 µM	
24	3082	488	Mammalian	Sprague-Dawley rat	Epididymis	Adult	*In vitro*	Lab					100 µM	
24	3083	355	Mammalian	Sprague-Dawley rat	Epididymis	Adult	*In vitro*	Lab					100 µM	
24	3084	358	Mammalian	Sprague-Dawley rat	Epididymis	Adult	*In vitro*	Lab					100 µM	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
189	3123	285	Mammalian	Sprague-Dawley rat		70 d	*In vivo*	Lab		Multi-g study	Food		0.1, 0.5 and 1 %	Average daily intake of 52, 256 and 509 mg/kg for males and 80, 385 and 794 mg/kg for females
310	4229	676	Mammalian	Sprague-Dawley rat		7 w	*In vivo*	Lab		14 d	Drinking water	22	0.01-10 mg/kg/d	
310	4230	676	Mammalian	Sprague-Dawley rat		7 w	*In vivo*	Lab		90 d	Drinking water	22	0.01-10 mg/kg/d	
322	4289	376	Mammalian	Sprague-Dawley rat		Prenatal	*In vivo*	Lab	Gestationl day 7 to postnatal day 77		In utero and food	23	1250 ppm	Dose range: 25, 250 and 1250 ppm (approx. 2, 20 and 100 mg/kg/day
405	4664	157	Mammalian	Sprague-Dawley rat		Perinatal	*In vivo*	Lab	10 d before conception until weaning		Maternal transfer		40 µg/kg body weight/d	Mother rats orally dosed
405	4665	157	Mammalian	Sprague-Dawley rat		Perinatal	*In vivo*	Lab	Gestational day 14 until day 6 after birth		Maternal transfer		400 µg/kg body weight/d	Mother rats orally dosed
412	4729	28	Mammalian	Sprague-Dawley rat	Sperm		*In vitro*	Lab		5 h		37	20 µM	
9	2474	221	Mammalian	Sprague-Dawley rat (Charles River), male	Testis	86 d	*In vivo*	Lab			Oral		LOEL = 400 mg/kg	
9	2475	221	Mammalian	Sprague-Dawley rat (Charles River), male	Testis	97-705 d	*In vivo*	Lab			Oral		LOEL = 100 mg/kg	
136	2742	260	Mammalian	Sprague-Dawley rat, female	Uterus	19 d	*In vivo*	Lab		3 d	Injection		50-300 mg/kg/d	
138	2750	260	Mammalian	Sprague-Dawley rat, female		10-13 w	*In vivo*	Lab		2 w	Oral		100-300 mg/kg/d	
136	2756	261	Mammalian	Sprague-Dawley rat, female	Uterus	19 d	*In vivo*	Lab		3 d	Injection		50-300 mg/kg/d	
138	2758	261	Mammalian	Sprague-Dawley rat, female		10-13 w	*In vivo*	Lab		2 w	Oral		100-300 mg/kg/d	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
145	2770	265	Mammalian	Sprague-Dawley rat, female			*In vivo*	Lab		7 h/day, 5 d/week for 10 w	Inhalation		80 ppm	Concentrations: 20, 39, 80 ppm
146	2773	266	Mammalian	Sprague-Dawley rat, female		4 m	*In vivo*	Lab		18 d	Subcutaneous		5-30 mg/kg body weight/2 ds	
174	2999	157	Mammalian	Sprague-Dawley rat, female	Vaginal epithelium	10-12 w	*In vivo*	Lab			Intraperitoneal		ED50 = 37.5 mg/kg body weight	In vitro detection of in vivo exposed animals
176	3020	368	Mammalian	Sprague-Dawley rat, female			*In vivo*	Lab		up to 6 w	Drinking water	20	10 ppb	Combination with 10 ppm metribuzin and 1 ppm methomyl
176	3021	365	Mammalian	Sprague-Dawley rat, female			*In vivo*	Lab		up to 6 w	Drinking water	20	1 ppm	Combination with 10 ppm metribuzin and 10 ppb aldicarb
191	3144	289	Mammalian	Sprague-Dawley rat, female		21 d	*In vivo*	Lab		2 d	Intraperitoneal		10-346 mg/kg	Soil extracts containing PCBs, PCDFs, PCDDs, concentraton range: 2-346 mg PCB/kg
191	3145	289	Mammalian	Sprague-Dawley rat, female		21 d	*In vivo*	Lab		2 d	Intraperitoneal		13-382 mg/kg	Dust extracts containing PCBs, PCDFs, PCDDs
191	3146	289	Mammalian	Sprague-Dawley rat, female		21 d	*In vivo*	Lab		2 d	Intraperitoneal		6-175 mg/kg	Air extracts containing PCBs, PCDFs, PCDDs
193	3164	242	Mammalian	Sprague-Dawley rat, female		Pubertal	*In vivo*	Lab		1 week	Subcutaneous		50 µg/ g body weight	Dosing on days 23, 25, 27 and 29 postpartum
193	3165	376	Mammalian	Sprague-Dawley rat, female		Pubertal	*In vivo*	Lab		1 week	Subcutaneous		50 µg/ g body weight	Dosing on days 23, 25, 27 and 29 postpartum
193	3166	383	Mammalian	Sprague-Dawley rat, female		Pubertal	*In vivo*	Lab		1 week	Subcutaneous		50 ng/ g body weight	Dosing on days 23, 25, 27 and 29 postpartum
193	3167	313	Mammalian	Sprague-Dawley rat, female		Pubertal	*In vivo*	Lab		1 week	Oral		2.5 ng/ g body weight	Dosing on days 25, 27, 29 and 31 postpartum
193	3168	395	Mammalian	Sprague-Dawley rat, female		Pubertal	*In vivo*	Lab		1 week	Oral		25 µg/ g body weight	Dosing on days 25, 27, 29 and 31 postpartum

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
193	3169	303	Mammalian	Sprague-Dawley rat, female		Pubertal	*In vivo*	Lab		1 week	Oral		25 µg/ g body weight	Dosing on days 25, 27, 29 and 31 postpartum
194	3170	377	Mammalian	Sprague-Dawley rat, female		21 d	*In vivo*	Lab		24 h	Subcutaneous		50-200 µg	Immature ovariectomized rats; single or multiple injections
194	3171	377	Mammalian	Sprague-Dawley rat, female		21 d	*In vivo*	Lab		96 h	Drinking water		5-100 µg/ml	Immature ovariectomized rats
215	3385	551	Mammalian	Sprague-Dawley rat, female		7 w	*In vivo*	Lab		4 d	Intraperitoneal		0.1-1 mg/kg body weight/d	
215	3386	552	Mammalian	Sprague-Dawley rat, female		7 w	*In vivo*	Lab		4 d	Intraperitoneal		1-10 mg/kg body weight/d	
225	3522	313	Mammalian	Sprague-Dawley rat, female		23 d	*In vivo*	Lab		24 h	Oral	22	2-32 µg/kg	Injection of PMSG 24 hours after dosing
225	3523	312	Mammalian	Sprague-Dawley rat, female		23 d	*In vivo*	Lab		24 h	Oral	22	9.4-150 µg/kg	Injection of PMSG 24 hours after dosing
225	3524	576	Mammalian	Sprague-Dawley rat, female		23 d	*In vivo*	Lab		24 h	Oral	22	90-720 µg/kg	Injection of PMSG 24 hours after dosing
254	3794	157	Mammalian	Sprague-Dawley rat, female	Uterus	21 d	*In vivo*	Lab		3 d	Oral		100-150 mg/kg/d	Uterotrophic assay; dose range: 5-150 mg/kg
254	3795	157	Mammalian	Sprague-Dawley rat, female	Uterus	21 d	*In vivo*	Lab		3 d	Oral		5-150 mg/kg/d	Uterotrophic assay
282	3995	647	Mammalian	Sprague-Dawley rat, female		21 d (prepubertal)	*In vivo*	Lab		2 d	Intraperitoneal	21	8-96 mg/kg	
282	3996	470	Mammalian	Sprague-Dawley rat, female		21 d (prepubertal)	*In vivo*	Lab		2 d	Intraperitoneal	21	8-96 mg/kg	PCB 110 contaminated with PCB 126 (0.5%)
289	4022	648	Mammalian	Sprague-Dawley rat, female	Uterus	21 d	*In vivo*	Lab		2 d	Intraperitoneal		10-30 mg/kg/d	Rat uterotrophic assay; dose range: 3-30 mg/kg
8	2473	221	Mammalian	Sprague-Dawley rat, male		90 d	*In vivo*	Lab			Oral		LOEL = 400 mg/kg/d	

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24	2504	225	Mammalian	Sprague-Dawley rat, male	Prostate	21 d	*In vitro*	Lab					100 µM	
86	2616	245	Mammalian	Sprague-Dawley rat, male	Epididymal cells	Adult	*In vitro*	Lab					Ki > 700 µM	
86	2617	400	Mammalian	Sprague-Dawley rat, male	Epididymal cells	Adult	*In vitro*	Lab					Ki = 92 µM	
86	2618	401	Mammalian	Sprague-Dawley rat, male	Epididymis	Adult	*In vitro*	Lab					Ki = 9.7 µM	
90	2627	245	Mammalian	Sprague-Dawley rat, male		Adult	*In vivo*	Lab		4 d	Oral		200 mg/kg/d	
90	2628	358	Mammalian	Sprague-Dawley rat, male		Adult	*In vivo*	Lab		4 d	Oral		200 mg/kg/d	
145	2771	265	Mammalian	Sprague-Dawley rat, male			*In vivo*	Lab		7 h/day, 5 d/week for 10 w	Inhalation		89 ppm	Concentrations: 19, 39, 89 ppm
172	2994	323	Mammalian	Sprague-Dawley rat, male		Pubertal (30 d)	*In vivo*	Lab		30 d	Subcutaneous	22	0.5 or 1 mg/kg body weight	Dosing from days 30 to 60 every 4 days in an alternate schedule
172	2995	323	Mammalian	Sprague-Dawley rat, male		Postpubertal (60 d)	*In vivo*	Lab		30 d	Subcutaneous	22	0.5 or 1 mg/kg body weight	Dosing from days 60 to 90 every 4 days in an alternate schedule
215	3387	550	Mammalian	Sprague-Dawley rat, male		10 w	*In vivo*	Lab		15 d	Intraperitoneal		0.5-10 mg/kg body weight/d	
215	3388	551	Mammalian	Sprague-Dawley rat, male		10 w	*In vivo*	Lab		15 d	Intraperitoneal		0.1-1 mg/kg body weight/d	
215	3389	552	Mammalian	Sprague-Dawley rat, male		10 w	*In vivo*	Lab		15 d	Intraperitoneal		0.1-1 mg/kg body weight/d	
241	3737	280	Mammalian	Sprague-Dawley rat, male		5 w	*In vivo*	Lab		6 w	Food		2% (daily)	Concentration range: 1% and 2%
281	3990	544	Mammalian	Sprague-Dawley rat, male			*In vivo*	Lab		4 d	Intraperitoneal	24.5	20 µmol/kg	Measurement of parameters on day 1, 2, 3, 4 and 7 after last dose
281	3991	627	Mammalian	Sprague-Dawley rat, male			*In vivo*	Lab		4 d	Intraperitoneal	24.5	20 µmol/kg	Measurement of parameters on day 1, 2, 3, 4 and 7 after last dose

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281	3992	545	Mammalian	Sprague-Dawley rat, male			*In vivo*	Lab		4 d	Intraperitoneal	24.5	20 µmol/kg	Measurement of parameters on day 1, 2, 3, 4 and 7 after last dose
281	3993	538	Mammalian	Sprague-Dawley rat, male			*In vivo*	Lab		4 d	Intraperitoneal	24.5	20 µmol/kg	Measurement of parameters on day 1, 2, 3, 4 and 7 after last dose
281	3994	641	Mammalian	Sprague-Dawley rat, male			*In vivo*	Lab		4 d	Intraperitoneal	24.5	431 µmol/kg	Measurement of parameters on day 1, 2, 3, 4 and 7 after last dose
283	3997	277	Mammalian	Sprague-Dawley rat, male	Liver	7 w	*In vivo*	Lab		5 d	Intraperitoneal	22-26	5-20 mg/kg	Dosing on days 1 and 3
312	4264	398	Mammalian	Sprague-Dawley rat, male	Liver	9 w	*In vivo*	Lab		15 d		23	1500 mg/kg/d	
312	4265	398	Mammalian	Sprague-Dawley rat, male	Liver	9 w	*In vivo*	Lab		28 d		23	1500 mg/kg/d	Dose range: 250-1500 mg/kg
313	4267	252	Mammalian	Sprague-Dawley rat, male	hAR	90 d	*In vitro*	Lab		Overnight		4	EC50 = 100-300 µM	Rat prostate competitive binding assay
313	4270	252	Mammalian	Sprague-Dawley rat, male	SAT	Immature (28 d)	*In vivo*	Lab		7 d	Oral		100 mg/kg/d	Hershberger assay using castrate-immature-TP-treated male rats
313	4271	245	Mammalian	Sprague-Dawley rat, male	SAT	Immature (28 d)	*In vivo*	Lab		7 d	Oral		200 mg/kg/d	Hershberger assay using castrate-immature-TP-treated male rats
313	4272	252	Mammalian	Sprague-Dawley rat, male	SAT	Adult (95 d)	*In vivo*	Lab		7 d	Oral		100 mg/kg/d	Adult-castrated testosterone-implanted male rats
313	4273	252	Mammalian	Sprague-Dawley rat, male	Prostate	Adult (95 d)	*In vivo*	Lab		4 d	Oral		100 mg/kg/d	Adult-castrated testosterone-implanted male rats
313	4274	245	Mammalian	Sprague-Dawley rat, male	Prostate	Adult (95 d)	*In vivo*	Lab		4 d	Oral		100 mg/kg/d	Adult-castrated testosterone-implanted male rats
313	4275	245	Mammalian	Sprague-Dawley rat, male	Gonads	Prenatal	*In vivo*	Lab	Gestational d 14-18		In utero		100 mg/kg/d	Evaluation at 5 to 5 month of age
313	4276	285	Mammalian	Sprague-Dawley rat, male	Gonads	Prenatal	*In vivo*	Lab	Gestational day 14 to postnatal day 3		In utero		100 mg/kg/d	Evaluation at 5 to 5 month of age
330	4346	470	Mammalian	Sprague-Dawley rat, male		Adult	*In vivo*	Lab		4 d	Intraperitoneal		6.25-400 µg/kg/d	Dosing on days 0 and 2

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
330	4347	470	Mammalian	Sprague-Dawley rat, male		Adult	*In vivo*	Lab		4 d	Intraperitoneal		100 µg/kg/d	Dosing on days 0 and 2
330	4348	292	Mammalian	Sprague-Dawley rat, male		Adult	*In vivo*	Lab		4 d	Intraperitoneal		25 mg/kg/d	Dosing on days 0 and 2
373	4546	537	Mammalian	Sprague-Dawley rat, male		Mature	*In vivo*	Lab		28 d	Food	21	100 ppm	Dose range: 1-100 ppm; calculated daily intake: 0.1-12.4 mg/kg
373	4547	537	Mammalian	Sprague-Dawley rat, male	Prostatic AR	5 m	*In vitro*	Lab		20 h		4	IC50 = 10.1 µM	AR competitive binding assay
373	4548	358	Mammalian	Sprague-Dawley rat, male	Prostatic AR	5 m	*In vitro*	Lab		20 h		4	IC50 = 12.7 µM	AR competitive binding assay
374	4549	628	Mammalian	Sprague-Dawley rat, male			*In vivo*	Lab		4 d	Intraperitoneal	24.5	20 µmol/kg/d	Analysis on days 1, 2, 3, 4 and 7 after last dosing
374	4550	626	Mammalian	Sprague-Dawley rat, male			*In vivo*	Lab		4 d	Intraperitoneal	24.5	20 µmol/kg/d	Analysis on days 1, 2, 3, 4 and 7 after last dosing
374	4551	625	Mammalian	Sprague-Dawley rat, male			*In vivo*	Lab		4 d	Intraperitoneal	24.5	20 µmol/kg/d	Analysis on days 1, 2, 3, 4 and 7 after last dosing
374	4552	546	Mammalian	Sprague-Dawley rat, male			*In vivo*	Lab		4 d	Intraperitoneal	24.5	20 µmol/kg/d	Analysis on days 1, 2, 3, 4 and 7 after last dosing
374	4553	621	Mammalian	Sprague-Dawley rat, male			*In vivo*	Lab		4 d	Intraperitoneal	24.5	20 µmol/kg/d	Analysis on days 1, 2, 3, 4 and 7 after last dosing
374	4554	544	Mammalian	Sprague-Dawley rat, male			*In vivo*	Lab		4 d	Intraperitoneal	24.5	20 µmol/kg/d	Analysis on days 1, 2, 3, 4 and 7 after last dosing
374	4555	627	Mammalian	Sprague-Dawley rat, male			*In vivo*	Lab		4 d	Intraperitoneal	24.5	20 µmol/kg/d	Analysis on days 1, 2, 3, 4 and 7 after last dosing
374	4556	545	Mammalian	Sprague-Dawley rat, male			*In vivo*	Lab		4 d	Intraperitoneal	24.5	20 µmol/kg/d	Analysis on days 1, 2, 3, 4 and 7 after last dosing
374	4557	538	Mammalian	Sprague-Dawley rat, male			*In vivo*	Lab		4 d	Intraperitoneal	24.5	20 µmol/kg/d	Analysis on days 1, 2, 3, 4 and 7 after last dosing

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
399	4647	323	Mammalian	Sprague-Dawley rat, male		30 d	*In vivo*	Lab		30 d	Drinking water	22	50 ppm	Calculated daily intake: 4 mg/kg body weight
399	4648	323	Mammalian	Sprague-Dawley rat, male		30 d	*In vivo*	Lab		60 d	Drinking water	22	50 ppm	Calculated daily intake: 4 mg/kg body weight
413	4730	147	Mammalian	Sprague-Dawley rat, male			*In vivo*	Lab		5 w	Inhalation	25	6000 ppm	Dose range: 4000 and 6000 ppm; exposure: 2 h/day, 7 days/week
97	2653	249	Mammalian	Swiss albino mouse, male		12-14 w	*In vivo*	Lab		1 month recovery	Intraperitoneal		25-100 mg/kg body weight	Single dose of 50 or 100 mg/kg or cumulative doses of 25 mg/kg for 5 days
97	2654	247	Mammalian	Swiss albino mouse, male		12-14 w	*In vivo*	Lab		1 month recovery	Intraperitoneal		25-100 mg/kg body weight	Single dose of 50 or 100 mg/kg or cumulative doses of 25 mg/kg for 5 days
107	2677	250	Mammalian	Swiss mouse, female		Adult, pregnant	*In vivo*	Lab		4-6 d	Oral		3.6-10.4 mg/kg/d	Dosing during various stages of pregnancy
122	2701	254	Mammalian	Swiss mouse, male		Adult	*In vivo*	Lab		30 d	Intraperitoneal		4-8 mg/kg body weight/d	Dose range: 2-8 mg/kg body weight
152	2785	275	Mammalian	Syrian golden hamster			*In vivo*	Lab		120 w	Food		200 ppm	Concentration range: 50-200 ppm
242	3738	383	Mammalian	Syrian golden hamster, female	Reproductive tract	Neonatal	*In vivo*	Lab		5 m	Subcutaneous		33 mg/kg body weight	Single dose on the day of birth
39	2528	229	Mammalian	Syrian hamster			*In vivo*	Lab		Oral, day 7,8 or 9 of gestation)			5 mg/kg/d	
40	2529	229	Mammalian	Syrian hamster (LVG strain)			*In vivo*	Lab		Oral, day 8 of pregnancy			LOEL = 5 mg/kg	Single dose: 0.5-10 mg/kg
40	2530	229	Mammalian	Syrian hamster (LVG strain)			*In vivo*	Lab		Oral, days 5-17 of pregnancy			LOEL = 1.5 µg/kg/d	Multiple doses: 0.75-3.5 mg/kg/day
3	2465	221	Mammalian	Syrian hamster, male			*In vivo*	Lab			Oral		LOEL = 400 mg/kg/d	
153	2786	275	Mammalian	Syrian hamster, male			*In vivo*	Lab		6-28 w	Food		100-500 ppm	
153	2788	259	Mammalian	Syrian hamster, male			*In vivo*	Lab		28 w	Food		200 ppm	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
288	4014	250	Mammalian	Western white face ewe		1-3 y	*In vivo*	Lab			Food		1 mg/kg body weight/d	Dosing 5 weeks prior to mating and throughout pregnancy lactation
288	4015	356	Mammalian	Western white face ewe		1-3 y	*In vivo*	Lab			Food		1 mg/kg body weight/d	Dosing 5 weeks prior to mating and throughout pregnancy lactation
219	3470	383	Mammalian	Wistar rat		Neonatal	*In vivo*	Lab		75 d	Subcutaneous		0.0037-0.37 mg/kg	Dosing on postnatal days 2, 4, 6, 8, 10 and 12
219	3471	382	Mammalian	Wistar rat		Neonatal	*In vivo*	Lab		25 d	Subcutaneous		0.37 mg/kg	Dosing on postnatal days 2, 4, 6, 8, 10 and 12
219	3472	413	Mammalian	Wistar rat		Neonatal	*In vivo*	Lab		18 d	Subcutaneous		2 mg/kg	Dosing on postnatal days 2-16
219	3473	376	Mammalian	Wistar rat		Neonatal	*In vivo*	Lab		25 d	Subcutaneous		4 mg/kg	Dosing on postnatal days 2-18
219	3474	425	Mammalian	Wistar rat		Neonatal	*In vivo*	Lab		25 d	Subcutaneous		150 mg/kg	Dosing on postnatal days 2-12
219	3475	157	Mammalian	Wistar rat		Neonatal	*In vivo*	Lab		25 d	Subcutaneous		37 mg/kg	Dosing on postnatal days 2-12
224	3521	575	Mammalian	Wistar rat		5 w	*In vivo*	Lab		28 d	Gavage	24	100 mg/kg/d	Concentration range:4-100 mg/kg; 1:1 mixture of 2-mercapto-4-methylbenzimidazole (CAS No. 27231-33-0) and 2-mercapto-5-methylbenzimidazole (CAS No. 27231-36-3)
154	2789	275	Mammalian	Wistar rat, female		Adult	*In vivo*	Lab		13 w	Food		9.5 mg/kg body weight/d	
287	4013	157	Mammalian	Wistar rat, female		60-67 d	*In vivo*	Lab		7 d	Subcutaneous	22	11-250 mg/kg/d	Ovariectomized rats
92	2637	246	Mammalian	Wistar rat, male			*In vivo*	Lab			Intraperitoneal		20 mg/kg body weight	Single dose, concentration range: 5-200 mg/kg body weight, after 30 minutes: cold shock of TRH injection

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
92	2650	248	Mammalian	Wistar rat, male			*In vivo*	Lab			Intraperitoneal		70 mg/kg body weight	Single dose, concentration range: 5-1000 mg/kg body weight, after 30 minutes: cold shock of TRH injection
240	3734	602	Mammalian	Wistar rat, male	Liver		*In vivo*	Lab		24 h	Intraperitoneal		0.3 mg/kg	
240	3735	65	Mammalian	Wistar rat, male	Liver		*In vivo*	Lab		24 h	Intraperitoneal		0.3 mg/kg	
240	3736	157	Mammalian	Wistar rat, male	Liver		*In vivo*	Lab		24 h	Intraperitoneal		0.3 mg/kg	
280	3989	157	Mammalian	Wistar rat, male	Liver	7 w	*In vivo*	Lab		4 d	Intraperitoneal	22-26	20-40 mg/kg/d	Dose range: 10-40 mg/kg
105	2675	250	Mammalian	Wistar rat, male offspring		7 m	*In vivo*	Lab			Maternal transfer		30 mg/kg	Single dose to mother on day 15 of pregnancy
244	3749	263	Mammalian	Wistar rat, uniparous female	Uterine ERalpha	4 w	*In vivo*	Lab		6 d	Oral		153.6 mg/kg/d	Technical grade 92.2%; dose equal to 20% LD50
244	3748	263	Mammalian	Wistar rat, virgin female	Uterine ERalpha	4 w	*In vivo*	Lab		6 d	Oral		153.6 mg/kg/d	Technical grade 92.2%; dose equal to 20% LD50
411	4727	110	Mammalian	Wistar SPF rat, male	Pancreas		*In vivo*	Lab		4 w	Drinking water	22	10% (wt/vol)	
411	4728	110	Mammalian	Wistar SPF rat, male	Pancreas		*In vitro*	Lab		30 min		37	40-160 mM	Incubation of isolated Islets of Langerhans in isoosmotic medium containing graded concentrations of ethanol
179	3027	327	Mollusc	Buccinum undatum L. (Common whelk)			*In vivo*	Field			Environmental contamination			Observed effects strongly correlated to shipping traffic
180	3028	479	Mollusc	Buccinum undatum L. (Common whelk)		Juvenile	*In vivo*	Lab	Flow through	up to 10 m	Water		0.1-1 µg/l	Concentration range: 0.01-1 µg/l
180	3029	479	Mollusc	Buccinum undatum L. (Common whelk), female		Adult	*In vivo*	Lab	Flow through	9 m	Water		0.01-1 µg/l	
246	3755	327	Mollusc	Crassostrea gigas (Pacific oyster)			*In vivo*	Field			Environmental contamination			Organisms collected at sites where they were in cultivation

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
44	2536	229	Mollusc	Crassostrea virginica (American oyster)			*In vivo*	Lab		48 h	Water		EC50 = 79 µg/l	Concentration range: 0.025-10 mg/l
386	4612	330	Mollusc	Ilyanassa obsoleta (Mud snail), female			*In vivo*	Lab	Semi-static	45 d	Water	19	2.5-200 ng/l	Organisms collected in the field; concentrations as Sn/l
178	3024	327	Mollusc	Littorina littorea (Periwinkle)			*In vivo*	Field			Environmental contamination			
178	3025	327	Mollusc	Littorina littorea (Periwinkle)		Adult	*In vivo*	Lab	Semi-static	6 m	Water		200 and 400 ng/l	
178	3026	327	Mollusc	Littorina littorea (Periwinkle)		Juvenile	*In vivo*	Lab	Semi-static	12 m	Water		100 and 400 ng/l	Effect depending on the ontogenetic stage of development of the female genital tract at the beginning of the exposure
246	3752	327	Mollusc	Littorina littorea (Periwinkle)			*In vivo*	Field			Environmental contamination		20-300 µg TBT-Sn/kg body weight	Organisms collected in the field
246	3753	327	Mollusc	Littorina littorea (Periwinkle)			*In vivo*	Field			Environmental contamination			Organisms collected in the field
36	2520	226	Mollusc	Mytilus edulis (Common mussel)			*In vivo*	Lab			Water		1 mg/l	
246	3751	327	Mollusc	Nucella lapilus (Dogwhelk)			*In vivo*	Field			Environmental contamination		62-713 µg TBT-Sn/kg body weight	Organisms collected in the field
246	3754	327	Mollusc	Nucella lapilus (Dogwhelk)			*In vivo*	Field			Environmental contamination			Organisms collected in the field
388	4614	327	Mollusc	Nucella lapilus (Dogwhelk)		Juvenile and subadult	*In vivo*	Lab	Flow through					Organisms collected in the field; exposure to commercially available TBT copolymer paint; release rate of TBT from the paint: 4 mg/cm2/day
388	4615	278	Mollusc	Nucella lapilus (Dogwhelk)		Juvenile and subadult	*In vivo*	Lab	Flow through					Organisms collected in the field; exposure to paint containing nonylphenol; release rate of nonylphenol from the paint: unknown

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
356	4441	327	Mollusc	Nucella lapilus (Dogwhelk), female		Adult	*In vivo*	Field			Environmental contamination		200-1400 ng Sn/g dry weight	Concentrations in female tissue
264	3864	327	Mollusc	Ruditapes decussata (clam)			*In vivo*	Field		5 w	Environmental concentration			Total organotin (> 90% TBT) residues: up to 318 ng/g wet weight as Sn
337	4616	330	Mollusc	Ruditapes decussata (Clam)			*In vivo*	Lab	Semi-static	7 d	Water	14-15	0.1-2.27 µg/l	
337	4617	330	Mollusc	Ruditapes decussata (Clam)			*In vitro*	Lab				18-20	0.1-1 mM	
389	4618	327	Mollusc	Ruditapes decussata (Clam)		Post-spawning	*In vivo*	Lab		7 d	Water		0.1-2.27 µg/l	Concentrations as Sn
389	4619	327	Mollusc	Ruditapes decussata (Clam)	Digestive gland microsomes		*In vitro*	Lab		20 min			0.1-1 mM	
383	4606	330	Mollusc	Thais clavigera (Rock shell), female			*In vivo*	Lab	Semi-static	24-30 d	Injection	20	0.1-10 µg/g body weight	Organisms collected in the field
383	4607	337	Mollusc	Thais clavigera (Rock shell), female			*In vivo*	Lab	Semi-static	24-30 d	Injection	20	0.1-10 µg/g body weight	Organisms collected in the field
383	4608	769	Mollusc	Thais clavigera (Rock shell), female			*In vivo*	Lab	Semi-static	24-30 d	Injection	20	10 µg/g body weight	Organisms collected in the field; dose range: 0.1-10 µg/g
71	2587	238	Reptile	Alligator mississipiensis		Eggs	*In vivo*	Lab			In ovo	30* and 33**	NOEC = 14 ppm	Concentration range: 0.14-14 ppm *female producing, **male producring
71	2614	245	Reptile	Alligator mississipiensis		Eggs	*In vivo*	Lab			In ovo	30* and 33**	NOEC = 14 ppm	Concentration range: 0.14-14 ppm *female producing, **male producring
71	2752	260	Reptile	Alligator mississipiensis		Eggs	*In vivo*	Lab			In ovo	30* and 33**	NOEC = 14 ppm	Concentration range: 0.14-14 p pm *female producing, **male producring
186	3060	360	Reptile	Alligator mississipiensis			*In vivo*	Field			Environmental contamination		up to 165 ppm	

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186	3061	265	Reptile	Alligator mississipiensis			*In vivo*	Field			Environmental contamination		up to > 1 ppb	
71	3067	380	Reptile	Alligator mississipiensis		Eggs	*In vivo*	Lab			In ovo	33*	0.014-14 ppm	*male producring
71	3068	413	Reptile	Alligator mississipiensis		Eggs	*In vivo*	Lab			In ovo	33*	0.14-14 ppm	*male producring
71	3069	464	Reptile	Alligator mississipiensis		Juvenile	*In vivo*	Field			Environmental contamination			Lake historically contaminated with dicofol, DDT and metabolites, dibromochloropropane, ethylene dibromide
371	4524	313	Reptile	Alligator mississipiensis (American alligator)		Embryo (stage 19-22)	*In vivo*	Lab			In ovo	33 *	1-10 µg/kg	Dose range: 0.1-10 µg/kg; eggs collected in the field; hatchlings processed at 21 days of age; * male producing temperature
371	4525	382	Reptile	Alligator mississipiensis (American alligator)		Embryo (stage 19-22)	*In vivo*	Lab			In ovo	33 *	0.1-10 µg/kg	Eggs collected in the field; hatchlings processed at 21 days of age; * male producing temperature
371	4526	415	Reptile	Alligator mississipiensis (American alligator)		Embryo (stage 19-22)	*In vivo*	Lab			In ovo	33 *	0.1-0.3 mg/kg	Dose range: 0.1-10 mg/kg; eggs collected in the field; hatchlings processed at 21 days of age; * male producing temperature
371	4527	358	Reptile	Alligator mississipiensis (American alligator)		Embryo (stage 19-22)	*In vivo*	Lab			In ovo	33 *	1-10 mg/kg	Dose range: 0.1-10 mg/kg; eggs collected in the field; hatchlings processed at 21 days of age; * male producing temperature
371	4528	549	Reptile	Alligator mississipiensis (American alligator)		Embryo (stage 19-22)	*In vivo*	Lab			In ovo	33 *	1-10 mg/kg	Dose range: 0.1-10 mg/kg; eggs collected in the field; hatchlings processed at 21 days of age; * male producing temperature
371	4529	377	Reptile	Alligator mississipiensis (American alligator)		Embryo (stage 19-22)	*In vivo*	Lab			In ovo	33 *	0.1-10 mg/kg	Eggs collected in the field; hatchlings processed at 21 days of age; * male producing temperature
18	2486	233	Reptile	Alligator mississipiensis, female	Oviduct	Adult	*In vitro*	Lab		1 h			LOEL = 220 nM	Chlordane containing both cis- and trans-isomer (>99% pure)
18	2487	234	Reptile	Alligator mississipiensis, female	Oviduct	Adult	*In vitro*	Lab		1 h			LOEL = 220 nM	Chlordane containing both cis- and trans-isomer (>99% pure)

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
18	2512	225	Reptile	Alligator mississipiensis, female	Oviduct	Adult	*In vitro*	Lab		1 h			NOEL = 630 nM	
30	2513	225	Reptile	Alligator mississipiensis, female	Oviduct	Adult	*In vitro*	Lab		1 h		25	0.63 µM	ER binding assay
30	2514	225	Reptile	Alligator mississipiensis, female	Oviduct	Adult	*In vitro*	Lab		12 h		4	30 µM	PR binding assay
30	2546	230	Reptile	Alligator mississipiensis, female	Oviduct	Adult	*In vitro*	Lab		12 h		4	30 µM	PR binding assay
30	2547	230	Reptile	Alligator mississipiensis, female	Oviduct	Adult	*In vitro*	Lab		1 h		25	IC50 = 34 µM	ER binding assay
18	2572	236	Reptile	Alligator mississipiensis, female	Oviduct	Adult	*In vitro*	Lab		1 h			NOEL = 200 nM	
30	2573	236	Reptile	Alligator mississipiensis, female	Oviduct	Adult	*In vitro*	Lab		1 h		25	0.2 µM	ER binding assay
30	2593	238	Reptile	Alligator mississipiensis, female	Oviduct	Adult	*In vitro*	Lab		1 h		25	IC50 not siginificant	ER binding assay
30	2594	238	Reptile	Alligator mississipiensis, female	Oviduct	Adult	*In vitro*	Lab		12 h		4	30 µM	PR binding assay
30	2611	243	Reptile	Alligator mississipiensis, female	Oviduct	Adult	*In vitro*	Lab		1 h		25	IC50 = 45.6 µM	ER binding assay
30	2612	243	Reptile	Alligator mississipiensis, female	Oviduct	Adult	*In vitro*	Lab		12 h		4	30 µM	PR binding assay
30	2753	260	Reptile	Alligator mississipiensis, female	Oviduct	Adult	*In vitro*	Lab		1 h		25	IC50 = 20.7 µM	ER binding assay
30	2754	260	Reptile	Alligator mississipiensis, female	Oviduct	Adult	*In vitro*	Lab		12 h		4	30 µM	PR binding assay
30	2763	264	Reptile	Alligator mississipiensis, female	Oviduct	Adult	*In vitro*	Lab		1 h		25	IC50 = 27.5 µM	ER binding assay

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
30	2764	264	Reptile	Alligator mississipiensis, female	Oviduct	Adult	*In vitro*	Lab		12 h		4	30 µM	PR binding assay
30	4028	465	Reptile	Alligator mississipiensis, female	Oviduct	Adult	*In vitro*	Lab		1 h		25	IC50 = 2.26 µM	ER binding assay
30	4029	465	Reptile	Alligator mississipiensis, female	Oviduct	Adult	*In vitro*	Lab		12 h		4	30 µM	PR binding assay
30	4030	242	Reptile	Alligator mississipiensis, female	Oviduct	Adult	*In vitro*	Lab		1 h		25	IC50 = 9.1 µM	ER binding assay
30	4031	599	Reptile	Alligator mississipiensis, female	Oviduct	Adult	*In vitro*	Lab		1 h		25	IC50 = 11.1 µM	ER binding assay
30	4032	415	Reptile	Alligator mississipiensis, female	Oviduct	Adult	*In vitro*	Lab		1 h		25	IC50 = 37.25 µM	ER binding assay
30	4033	241	Reptile	Alligator mississipiensis, female	Oviduct	Adult	*In vitro*	Lab		1 h		25	IC50 > 50 µM	ER binding assay
30	4034	359	Reptile	Alligator mississipiensis, female	Oviduct	Adult	*In vitro*	Lab		1 h		25	IC50 > 50 µM	ER binding assay
30	4035	358	Reptile	Alligator mississipiensis, female	Oviduct	Adult	*In vitro*	Lab		1 h		25	IC50 > 50 µM	ER binding assay
30	4036	654	Reptile	Alligator mississipiensis, female	Oviduct	Adult	*In vitro*	Lab		1 h		25	IC50 not significant	ER binding assay
30	4037	355	Reptile	Alligator mississipiensis, female	Oviduct	Adult	*In vitro*	Lab		1 h		25	IC50 not significant	ER binding assay
30	4038	237	Reptile	Alligator mississipiensis, female	Oviduct	Adult	*In vitro*	Lab		1 h		25	IC50 = 10.6 µM	ER binding assay
30	4039	485	Reptile	Alligator mississipiensis, female	Oviduct	Adult	*In vitro*	Lab		1 h		25	IC50 = 19 µM	ER binding assay
30	4040	301	Reptile	Alligator mississipiensis, female	Oviduct	Adult	*In vitro*	Lab		1 h		25	IC50 = 37.2 µM	ER binding assay

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
30	4041	497	Reptile	Alligator mississipiensis, female	Oviduct	Adult	*In vitro*	Lab		1 h		25	IC50 = 40 µM	ER binding assay
30	4042	227	Reptile	Alligator mississipiensis, female	Oviduct	Adult	*In vitro*	Lab		1 h		25	IC50 > 50 µM	ER binding assay
30	4043	655	Reptile	Alligator mississipiensis, female	Oviduct	Adult	*In vitro*	Lab		1 h		25	IC50 > 50 µM	ER binding assay
30	4044	228	Reptile	Alligator mississipiensis, female	Oviduct	Adult	*In vitro*	Lab		1 h		25	IC50 not significant	ER binding assay
30	4045	599	Reptile	Alligator mississipiensis, female	Oviduct	Adult	*In vitro*	Lab		12 h		4	30 µM	PR binding assay
30	4046	655	Reptile	Alligator mississipiensis, female	Oviduct	Adult	*In vitro*	Lab		12 h		4	30 µM	PR binding assay
30	4047	485	Reptile	Alligator mississipiensis, female	Oviduct	Adult	*In vitro*	Lab		12 h		4	30 µM	PR binding assay
30	4048	241	Reptile	Alligator mississipiensis, female	Oviduct	Adult	*In vitro*	Lab		12 h		4	30 µM	PR binding assay
30	4049	242	Reptile	Alligator mississipiensis, female	Oviduct	Adult	*In vitro*	Lab		12 h		4	30 µM	PR binding assay
30	4050	415	Reptile	Alligator mississipiensis, female	Oviduct	Adult	*In vitro*	Lab		12 h		4	30 µM	PR binding assay
30	4051	358	Reptile	Alligator mississipiensis, female	Oviduct	Adult	*In vitro*	Lab		12 h		4	30 µM	PR binding assay
30	4052	654	Reptile	Alligator mississipiensis, female	Oviduct	Adult	*In vitro*	Lab		12 h		4	30 µM	PR binding assay
30	4053	359	Reptile	Alligator mississipiensis, female	Oviduct	Adult	*In vitro*	Lab		12 h		4	30 µM	PR binding assay
30	4054	497	Reptile	Alligator mississipiensis, female	Oviduct	Adult	*In vitro*	Lab		12 h		4	30 µM	PR binding assay

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
30	4055	227	Reptile	Alligator mississipiensis, female	Oviduct	Adult	*In vitro*	Lab		12 h		4	30 µM	PR binding assay
30	4056	228	Reptile	Alligator mississipiensis, female	Oviduct	Adult	*In vitro*	Lab		12 h		4	30 µM	PR binding assay
285	3999	233	Reptile	Alligator mississipiensis, male		Juvenile	*In vivo*	Field			Environmental contamination			Habitat contaminated with organochlorine pesticides or metabolites and PCBs
285	4000	225	Reptile	Alligator mississipiensis, male		Juvenile	*In vivo*	Field			Environmental contamination			Habitat contaminated with organochlorine pesticides or metabolites and PCBs
285	4001	229	Reptile	Alligator mississipiensis, male		Juvenile	*In vivo*	Field			Environmental contamination			Habitat contaminated with organochlorine pesticides or metabolites and PCBs
285	4002	234	Reptile	Alligator mississipiensis, male		Juvenile	*In vivo*	Field			Environmental contamination			Habitat contaminated with organochlorine pesticides or metabolites and PCBs
285	4003	231	Reptile	Alligator mississipiensis, male		Juvenile	*In vivo*	Field			Environmental contamination			Habitat contaminated with organochlorine pesticides or metabolites and PCBs
285	4004	232	Reptile	Alligator mississipiensis, male		Juvenile	*In vivo*	Field			Environmental contamination			Habitat contaminated with organochlorine pesticides or metabolites and PCBs
285	4005	237	Reptile	Alligator mississipiensis, male		Juvenile	*In vivo*	Field			Environmental contamination			Habitat contaminated with organochlorine pesticides or metabolites and PCBs
285	4006	242	Reptile	Alligator mississipiensis, male		Juvenile	*In vivo*	Field			Environmental contamination			Habitat contaminated with organochlorine pesticides or metabolites and PCBs
285	4007	241	Reptile	Alligator mississipiensis, male		Juvenile	*In vivo*	Field			Environmental contamination			Habitat contaminated with organochlorine pesticides or metabolites and PCBs
285	4008	415	Reptile	Alligator mississipiensis, male		Juvenile	*In vivo*	Field			Environmental contamination			Habitat contaminated with organochlorine pesticides or metabolites and PCBs
285	4009	358	Reptile	Alligator mississipiensis, male		Juvenile	*In vivo*	Field			Environmental contamination			Habitat contaminated with organochlorine pesticides or metabolites and PCBs
285	4010	359	Reptile	Alligator mississipiensis, male		Juvenile	*In vivo*	Field			Environmental contamination			Habitat contaminated with organochlorine pesticides or metabolites and PCBs

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
212	3379	289	Reptile	Chelydra serpentina serpentina			*In vivo*	Field			Environmental contamination			Environmental contamination of PCBs, PCDD, PCDF and organochlorine pesticides
277	3980	358	Reptile	Chelydra serpentina serpentina		Eggs	*In vivo*	Lab		8 w	In ovo	26 *	0.05-6.25 mg/kg egg	Single dose at embryonic stage 14 * male producing temperature
277	3981	380	Reptile	Chelydra serpentina serpentina		Eggs	*In vivo*	Lab		8 w	In ovo	26 *	1.44 mg/kg egg	Single dose at embryonic stage 14 * male producing temperature
196	3187	474	Reptile	Trachemys scripta (Red-eared slider turtle)		Eggs	*In vivo*	Lab		7 w	In ovo	27.8 *	100 µg	Dosing at the beginning of gonadal differentiation (approx. 4 weeks after egg laying; concentration range: 10 and 100 µg * male producing temperature
196	3189	380	Reptile	Trachemys scripta (Red-eared slider turtle)		Eggs	*In vivo*	Lab		7 w	In ovo	27.8 *	10 µg	Dosing at the beginning of gonadal differentiation (approx. 4 weeks after egg laying; * male producing temperature
196	3190	474	Reptile	Trachemys scripta (Red-eared slider turtle)		Eggs	*In vivo*	Lab		7 w	In ovo	26 *	100-200 µg	Dosing at the beginning of gonadal differentiation (approx. 4 weeks after egg laying; *100% male producing temperature
196	3191	436	Reptile	Trachemys scripta (Red-eared slider turtle)		Eggs	*In vivo*	Lab		7 w	In ovo	26 *	200 µg	Dosing at the beginning of gonadal differentiation (approx. 4 weeks after egg laying; concentration range: 100 and 200 µg; * 100% male producing temperature
196	3192	380	Reptile	Trachemys scripta (Red-eared slider turtle)		Eggs	*In vivo*	Lab		7 w	In ovo	26 *	10 µg	Dosing at the beginning of gonadal differentiation (approx. 4 weeks after egg laying; * 100% male producing temperature
196	3193	514	Reptile	Trachemys scripta (Red-eared slider turtle)		Eggs	*In vivo*	Lab		7 w	In ovo	27.8 *	10-100 µg	Dosing at the beginning of gonadal differentiation (approx. 4 weeks after egg laying; * male producing temperature
196	3195	516	Reptile	Trachemys scripta (Red-eared slider turtle)		Eggs	*In vivo*	Lab		7 w	In ovo	27.8 *	10-100 µg	Dosing at the beginning of gonadal differentiation (approx. 4 weeks after egg laying; * male producing temperature

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
196	3196	517	Reptile	Trachemys scripta (Red-eared slider turtle)		Eggs	*In vivo*	Lab		7 w	In ovo	27.8 *	5-50 µg	Dosing at the beginning of gonadal differentiation (approx. 4 weeks after egg laying; *male producing temperature
196	3197	518	Reptile	Trachemys scripta (Red-eared slider turtle)		Eggs	*In vivo*	Lab		7 w	In ovo	27.8 *	25-250 µg	Dosing at the beginning of gonadal differentiation (approx. 4 weeks after egg laying; * male producing temperature
196	3199	299	Reptile	Trachemys scripta (Red-eared slider turtle)		Eggs	*In vivo*	Lab		7 w	In ovo	27.8 *	10-100 µg	Dosing at the beginning of gonadal differentiation (approx. 4 weeks after egg laying; * male producing temperature
196	3200	521	Reptile	Trachemys scripta (Red-eared slider turtle)		Eggs	*In vivo*	Lab		7 w	In ovo	27.8 *	3.35-33.5 µg	Dosing at the beginning of gonadal differentiation (approx. 4 weeks after egg laying; * male producing temperature
196	3201	522	Reptile	Trachemys scripta (Red-eared slider turtle)		Eggs	*In vivo*	Lab		7 w	In ovo	27.8 *	5-50 µg	Dosing at the beginning of gonadal differentiation (approx. 4 weeks after egg laying; * male producing temperature
213	3380	378	Reptile	Trachemys scripta (Red-eared slider turtle)		Eggs	*In vivo*	Lab			In ovo	26*	10-1000 ng	Single dose at embryonic stage 17 * male producing temperature
213	3381	380	Reptile	Trachemys scripta (Red-eared slider turtle)		Eggs	*In vivo*	Lab			In ovo	26*	75-5000 ng	Single dose at embryonic stage 17 * male producing temperature
213	3382	379	Reptile	Trachemys scripta (Red-eared slider turtle)		Eggs	*In vivo*	Lab			In ovo	26*	10-1000 ng	Single dose at embryonic stage 17 * male producing temperature
235	3693	497	Reptile	Trachemys scripta (Red-eared slider turtle)		Eggs	*In vivo*	Lab			In ovo	28.6 *	0.16 µM	Single dose at embryonic stage 17 * male-biased sex ratio
235	3694	358	Reptile	Trachemys scripta (Red-eared slider turtle)		Eggs	*In vivo*	Lab			In ovo	28.6 *	18 µM	Single dose at embryonic stage 17 * male-biased sex ratio
235	3695	223	Reptile	Trachemys scripta (Red-eared slider turtle)		Eggs	*In vivo*	Lab			In ovo	28.6 *	0.22 µM	Single dose at embryonic stage 17 * male-biased sex ratio
235	3696	237	Reptile	Trachemys scripta (Red-eared slider turtle)		Eggs	*In vivo*	Lab			In ovo	28.6 *	0.25 µM	Single dose at embryonic stage 17 * male-biased sex ratio

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
235	3697	301	Reptile	Trachemys scripta (Red-eared slider turtle)		Eggs	*In vivo*	Lab			In ovo	28.6 *	0.53 µM	Single dose at embryonic stage 17 * male-biased sex ratio
235	3698	236	Reptile	Trachemys scripta (Red-eared slider turtle)		Eggs	*In vivo*	Lab			In ovo	28.6 *	0.22 µM	Single dose at embryonic stage 17 * male-biased sex ratio
235	3699	359	Reptile	Trachemys scripta (Red-eared slider turtle)		Eggs	*In vivo*	Lab			In ovo	28.6 *	2.6 µM	Single dose at embryonic stage 17 * male-biased sex ratio
235	3700	225	Reptile	Trachemys scripta (Red-eared slider turtle)		Eggs	*In vivo*	Lab			In ovo	28.6 *	0.63 µM	Single dose at embryonic stage 17 * male-biased sex ratio
235	3701	380	Reptile	Trachemys scripta (Red-eared slider turtle)		Eggs	*In vivo*	Lab			In ovo	28.6 *	0.01 µM	Single dose at embryonic stage 17 * male-biased sex ratio
237	3718	223	Reptile	Trachemys scripta (Red-eared slider turtle)		Eggs	*In vivo*	Lab			In ovo	28.6	0.22 µM	Single dose at embryonic stage 17
237	3719	237	Reptile	Trachemys scripta (Red-eared slider turtle)		Eggs	*In vivo*	Lab			In ovo	28.6	0.25 µM	Single dose at embryonic stage 17
196	3188	436	Reptile	Trachemys scripta (Red-eared slider turtle)		Eggs	*In vivo*	Lab		7 w	In ovo	27.8 *	100 µg	Dosing at the beginning of gonadal differentiation (approx. 4 weeks after egg laying; concentration range: 10 and 100 µg * male producing temperature
196	3194	515	Reptile	Trachemys scripta (Red-eared slider turtle)		Eggs	*In vivo*	Lab		7 w	In ovo	27.8 *	10-100 µg	Dosing at the beginning of gonadal differentiation (approx. 4 weeks after egg laying; * male producing temperature
196	3198	519	Reptile	Trachemys scripta (Red-eared slider turtle)		Eggs	*In vivo*	Lab		7 w	In ovo	27.8 *	10-100 µg	Dosing at the beginning of gonadal differentiation (approx. 4 weeks after egg laying; male producing temperature
237	3717	301	Reptile	Trachemys scripta (Red-eared slider turtle)		Eggs	*In vivo*	Lab			In ovo	28.6	0.26 µM	Single dose at embryonic stage 17
136	2743	260	Yeast	Estrogen dependent PL3 yeast	ER		*In vitro*	Lab					10 µM	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
136	2757	261	Yeast	Estrogen dependent PL3 yeast	ER		*In vitro*	Lab					10 µM	
297	4132	242	Yeast	Recombinant yeast	hER		*In vitro*	Lab		3 d		32	0.5-100 ppm	Dose range: 0.05-100 ppm
297	4133	65	Yeast	Recombinant yeast	hER		*In vitro*	Lab		3 d		32	0.05-10 ppm	Dose range: 0.005-10 ppm
297	4134	277	Yeast	Recombinant yeast	hER		*In vitro*	Lab		3 d		32	50-1000 ppb	Dose range: 10-1000 ppb
304	4150	511	Yeast	Recombinant yeast	hER		*In vitro*	Lab		3 d		30		
304	4151	660	Yeast	Recombinant yeast	hER		*In vitro*	Lab		3 d		30		
304	4152	661	Yeast	Recombinant yeast	hER		*In vitro*	Lab		3 d		30		
304	4153	662	Yeast	Recombinant yeast	hER		*In vitro*	Lab		3 d		30		
304	4154	668	Yeast	Recombinant yeast	hER		*In vitro*	Lab		3 d		30		
304	4155	659	Yeast	Recombinant yeast	hER		*In vitro*	Lab		3 d		30		
304	4156	664	Yeast	Recombinant yeast	hER		*In vitro*	Lab		3 d		30		
304	4157	665	Yeast	Recombinant yeast	hER		*In vitro*	Lab		3 d		30		
304	4158	666	Yeast	Recombinant yeast	hER		*In vitro*	Lab		3 d		30		
304	4159	657	Yeast	Recombinant yeast	hER		*In vitro*	Lab		3 d		30	EC50 = 1.12 µM	
304	4160	658	Yeast	Recombinant yeast	hER		*In vitro*	Lab		3 d		30	EC50 = 2.57 µM	
304	4161	663	Yeast	Recombinant yeast	hER		*In vitro*	Lab		3 d		30	EC50 = 63.4 µM	
304	4162	667	Yeast	Recombinant yeast	hER		*In vitro*	Lab		3 d		30	EC50 = 2.53 µM	
304	4163	669	Yeast	Recombinant yeast	hER		*In vitro*	Lab		3 d		30	EC50 = 58.9 µM	
304	4164	670	Yeast	Recombinant yeast	hER		*In vitro*	Lab		3 d		30	EC50 = 0.288 µM	
304	4165	671	Yeast	Recombinant yeast	hER		*In vitro*	Lab		3 d		30	EC50 = 5.08 µM	
304	4166	672	Yeast	Recombinant yeast	hER		*In vitro*	Lab		3 d		30	EC50 = 0.564 µM	
304	4167	673	Yeast	Recombinant yeast	hER		*In vitro*	Lab		3 d		30	EC50 = 0.792 µM	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
304	4168	474	Yeast	Recombinant yeast	hER		*In vitro*	Lab		3 d		30	EC50 = 5.08 nM	
304	4169	436	Yeast	Recombinant yeast	hER		*In vitro*	Lab		3 d		30	EC50 = 12.6 nM	
304	4170	674	Yeast	Recombinant yeast	hER		*In vitro*	Lab		3 d		30	EC50 = 127 nM	
304	4171	503	Yeast	Recombinant yeast	hER		*In vitro*	Lab		3 d		30	EC50 = 1.05 µM	
304	4172	426	Yeast	Recombinant yeast	hER		*In vitro*	Lab		3 d		30	EC50 = 5.42 µM	
304	4173	508	Yeast	Recombinant yeast	hER		*In vitro*	Lab		3 d		30	EC50 = 59 µM	
304	4174	506	Yeast	Recombinant yeast	hER		*In vitro*	Lab		3 d		30		
304	4175	502	Yeast	Recombinant yeast	hER		*In vitro*	Lab		3 d		30		
304	4176	509	Yeast	Recombinant yeast	hER		*In vitro*	Lab		3 d		30		
304	4177	287	Yeast	Recombinant yeast	hER		*In vitro*	Lab		3 d		30		
309	4209	567	Yeast	Recombinant yeast	hERalpha		*In vitro*	Lab		4 d		32	EC50 = 13 µM	Yeast estrogen screen
309	4210	243	Yeast	Recombinant yeast	hERalpha		*In vitro*	Lab		4 d		32	1-7 µM	Yeast estrogen screen
309	4211	566	Yeast	Recombinant yeast	hERalpha		*In vitro*	Lab		4 d		32	0.2-16 µM	Yeast estrogen screen
309	4212	565	Yeast	Recombinant yeast	hERalpha		*In vitro*	Lab		4 d		32	0.2-16 µM	Yeast estrogen screen
309	4213	356	Yeast	Recombinant yeast	hERalpha		*In vitro*	Lab		4 d		32	0.2-16 µM	Yeast estrogen screen
309	4214	568	Yeast	Recombinant yeast	hERalpha		*In vitro*	Lab		4 d		32	0.2-16 µM	Yeast estrogen screen
309	4215	262	Yeast	Recombinant yeast	hERalpha		*In vitro*	Lab		4 d		32	30-63 µM	Yeast estrogen screen
309	4216	252	Yeast	Recombinant yeast	hERalpha		*In vitro*	Lab		4 d		32	30-63 µM	Yeast estrogen screen
309	4217	405	Yeast	Recombinant yeast	hERalpha		*In vitro*	Lab		4 d		32	30-63 µM	Yeast estrogen screen
309	4218	251	Yeast	Recombinant yeast	hERalpha		*In vitro*	Lab		4 d		32	30-63 µM	Yeast estrogen screen
309	4219	244	Yeast	Recombinant yeast	hERalpha		*In vitro*	Lab		4 d		32	30-63 µM	Yeast estrogen screen
309	4220	239	Yeast	Recombinant yeast	hERalpha		*In vitro*	Lab		4 d		32	30-63 µM	Yeast estrogen screen
309	4221	574	Yeast	Recombinant yeast	hERalpha		*In vitro*	Lab		4 d		32	30-63 µM	Yeast estrogen screen

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
309	4222	572	Yeast	Recombinant yeast	hERalpha		*In vitro*	Lab		4 d		32	125-250 µM	Yeast estrogen screen
309	4223	573	Yeast	Recombinant yeast	hERalpha		*In vitro*	Lab		4 d		32	125-250 µM	Yeast estrogen screen
309	4224	407	Yeast	Recombinant yeast	hERalpha		*In vitro*	Lab		4 d		32	125-250 µM	Yeast estrogen screen
309	4225	569	Yeast	Recombinant yeast	hERalpha		*In vitro*	Lab		4 d		32	500 µM	Yeast estrogen screen
309	4226	570	Yeast	Recombinant yeast	hERalpha		*In vitro*	Lab		4 d		32	500 µM	Yeast estrogen screen
309	4227	353	Yeast	Recombinant yeast	hERalpha		*In vitro*	Lab		4 d		32	500 µM	Yeast estrogen screen
309	4228	266	Yeast	Recombinant yeast	hERalpha		*In vitro*	Lab		4 d		32	500 µM	Yeast estrogen screen
27	2505	225	Yeast	Saccharomyces cerevisiae (Yeast)	ER		*In vitro*	Lab					EC50 > 33 µM	
27	2506	225	Yeast	Saccharomyces cerevisiae (Yeast)	ER		*In vitro*	Lab					EC50 > 50 µM	
188	3091	282	Yeast	Yeast	ER		*In vitro*	Lab		4-6 d		32	0.5-1000 µM	
188	3092	285	Yeast	Yeast	ER		*In vitro*	Lab		4-6 d		32	0.5-1000 µM	
188	3093	391	Yeast	Yeast	ER		*In vitro*	Lab		4-6 d		32	0.5-1000 µM	
188	3094	279	Yeast	Yeast	ER		*In vitro*	Lab		4-6 d		32	0.5-1000 µM	
188	3095	280	Yeast	Yeast	ER		*In vitro*	Lab		4-6 d		32	0.5-1000 µM	
188	3096	283	Yeast	Yeast	ER		*In vitro*	Lab		4-6 d		32	0.5-1000 µM	
188	3101	284	Yeast	Yeast	ER		*In vitro*	Lab		4-6 d		32	0.1-1 µM	
188	3107	489	Yeast	Yeast	ER		*In vitro*	Lab		4-6 d		32	0.5-1000 µM	
188	3108	491	Yeast	Yeast	ER		*In vitro*	Lab		4-6 d		32	0.5-1000 µM	
188	3109	492	Yeast	Yeast	ER		*In vitro*	Lab		4-6 d		32	0.5-1000 µM	
188	3110	493	Yeast	Yeast	ER		*In vitro*	Lab		4-6 d		32	0.5-1000 µM	
188	3111	490	Yeast	Yeast	ER		*In vitro*	Lab		4-6 d		32	0.5-1000 µM	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
188	3112	494	Yeast	Yeast	ER		*In vitro*	Lab		4-6 d		32	0.5-1000 µM	
188	3113	495	Yeast	Yeast	ER		*In vitro*	Lab		4-6 d		32	0.5-1000 µM	
188	3114	496	Yeast	Yeast	ER		*In vitro*	Lab		4-6 d		32	0.5-1000 µM	
199	3228	323	Yeast	Yeast	rtER		*In vitro*	Lab		4 h			IC 50 = 20 µM	
199	3229	323	Yeast	Yeast	hER		*In vitro*	Lab		4 h			IC 50 = 600 µM	
199	3230	323	Yeast	Yeast	rtER		*In vitro*	Lab		4 h			50-100 µM	
199	3231	323	Yeast	Yeast	hER		*In vitro*	Lab		4 h			100 µM	
199	3232	362	Yeast	Yeast	rtER		*In vitro*	Lab		4 h			10 µM	
199	3233	362	Yeast	Yeast	hER		*In vitro*	Lab		4 h			10 µM	
199	3234	524	Yeast	Yeast	rtER		*In vitro*	Lab		4 h			10 µM	
199	3235	524	Yeast	Yeast	hER		*In vitro*	Lab		4 h			10 µM	
199	3236	525	Yeast	Yeast	rtER		*In vitro*	Lab		4 h			10 µM	
199	3237	525	Yeast	Yeast	hER		*In vitro*	Lab		4 h			10 µM	
199	3238	526	Yeast	Yeast	rtER		*In vitro*	Lab		4 h			10 µM	
199	3239	526	Yeast	Yeast	hER		*In vitro*	Lab		4 h			10 µM	
199	3240	527	Yeast	Yeast	rtER		*In vitro*	Lab		4 h			10 µM	
199	3241	527	Yeast	Yeast	hER		*In vitro*	Lab		4 h			10 µM	
232	3620	383	Yeast	Yeast	hER		*In vitro*	Lab		Overnight			0.1-100 nM	
232	3621	157	Yeast	Yeast	hER		*In vitro*	Lab		Overnight			0.1-100 µM	
232	3622	65	Yeast	Yeast	hER		*In vitro*	Lab		Overnight			0.1-100 µM	
232	3623	279	Yeast	Yeast	hER		*In vitro*	Lab		Overnight			1-10 µM	
232	3624	242	Yeast	Yeast	hER		*In vitro*	Lab		Overnight			1-100 µM	
232	3625	595	Yeast	Yeast	hER		*In vitro*	Lab		Overnight			10-500 µM	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
232	3630	423	Yeast	Yeast	hER		*In vitro*	Lab		Overnight			0.1-10 µM	
240	3730	602	Yeast	Yeast	mPXR		*In vitro*	Lab		24 h		30	0.01-10 µM	Concentration range: 10 nM - 10 µM
240	3731	65	Yeast	Yeast	mPXR		*In vitro*	Lab		24 h		30	0.01-10 µM	Concentration range: 10 nM - 10 µM
240	3732	157	Yeast	Yeast	mPXR		*In vitro*	Lab		24 h		30	1 µM	
240	3733	240	Yeast	Yeast	mPXR		*In vitro*	Lab		24 h		30	1 µM	
376	4559	383	Yeast	Yeast	hER		*In vitro*	Lab		2 h		30	10 nM - 1 mM	
376	4560	557	Yeast	Yeast	hER		*In vitro*	Lab		2 h		30	10 nM - 1 mM	
376	4561	382	Yeast	Yeast	hER		*In vitro*	Lab		2 h		30	10 nM - 1 mM	
376	4562	529	Yeast	Yeast	hER		*In vitro*	Lab		2 h		30	10 µM - 1 mM	Dose range: 10 nM - 1 mM
376	4563	277	Yeast	Yeast	hER		*In vitro*	Lab		2 h		30	EC50 = 6.7 µM	
376	4564	65	Yeast	Yeast	hER		*In vitro*	Lab		2 h		30	10 µM - 1 mM	Technical grade; dose range: 10 nM - 1 mM
376	4565	157	Yeast	Yeast	hER		*In vitro*	Lab		2 h		30	EC50 = 104 µM	
376	4566	508	Yeast	Yeast	hER		*In vitro*	Lab		2 h		30	10 µM - 1 mM	Dose range: 10 nM - 1 mM
376	4567	358	Yeast	Yeast	hER		*In vitro*	Lab		2 h		30	1 mM	Dose range: 10 nM - 1 mM
376	4568	730	Yeast	Yeast	hER		*In vitro*	Lab		2 h		30	10 nM - 1 mM	
376	4569	288	Yeast	Yeast	hER		*In vitro*	Lab		2 h		30	10 nM - 1 mM	
376	4570	355	Yeast	Yeast	hER		*In vitro*	Lab		2 h		30	10 nM - 1 mM	
376	4571	611	Yeast	Yeast	hER		*In vitro*	Lab		2 h		30	10 nM - 1 mM	
376	4572	760	Yeast	Yeast	hER		*In vitro*	Lab		2 h		30	10 nM - 1 mM	
376	4573	351	Yeast	Yeast	hER		*In vitro*	Lab		2 h		30	10 nM - 1 mM	
376	4574	478	Yeast	Yeast	hER		*In vitro*	Lab		2 h		30	10 nM - 1 mM	
376	4575	761	Yeast	Yeast	hER		*In vitro*	Lab		2 h		30	10 nM - 1 mM	
376	4576	350	Yeast	Yeast	hER		*In vitro*	Lab		2 h		30	10 nM - 1 mM	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
376	4577	280	Yeast	Yeast	hER		*In vitro*	Lab		2 h		30	10 nM - 1 mM	
376	4578	250	Yeast	Yeast	hER		*In vitro*	Lab		2 h		30	10 nM - 1 mM	
376	4579	266	Yeast	Yeast	hER		*In vitro*	Lab		2 h		30	10 nM - 1 mM	
376	4580	225	Yeast	Yeast	hER		*In vitro*	Lab		2 h		30	10 nM - 1 mM	
376	4581	236	Yeast	Yeast	hER		*In vitro*	Lab		2 h		30	10 nM - 1 mM	
376	4582	226	Yeast	Yeast	hER		*In vitro*	Lab		2 h		30	10 nM - 1 mM	
376	4583	260	Yeast	Yeast	hER		*In vitro*	Lab		2 h		30	10 nM - 1 mM	
376	4584	464	Yeast	Yeast	hER		*In vitro*	Lab		2 h		30		Toluene extracts from sewage sludge
407	4668	380	Yeast	Yeast	rtER		*In vitro*	Lab		4 h		30	1-1000 nM	Dose range: 0.01-1000 nM
407	4669	378	Yeast	Yeast	rtER		*In vitro*	Lab		4 h		30	10-1000 nM	
407	4670	379	Yeast	Yeast	rtER		*In vitro*	Lab		4 h		30	10-1000 nM	
407	4671	383	Yeast	Yeast	rtER		*In vitro*	Lab		4 h		30	10-1000 nM	
407	4673	65	Yeast	Yeast	rtER		*In vitro*	Lab		4 h		30	1-100 µM	Dose range: 0.01 nM - 100 µM
407	4674	373	Yeast	Yeast	rtER		*In vitro*	Lab		4 h		30	10-100 µM	Dose range: 0.01 nM - 100 µM
407	4675	773	Yeast	Yeast	rtER		*In vitro*	Lab		4 h		30	10-100 µM	Dose range: 0.01 nM - 100 µM
407	4676	287	Yeast	Yeast	rtER		*In vitro*	Lab		4 h		30	10-100 µM	Dose range: 0.01 nM - 100 µM
407	4677	775	Yeast	Yeast	rtER		*In vitro*	Lab		4 h		30	0.01 nM -100 µM	
407	4678	774	Yeast	Yeast	rtER		*In vitro*	Lab		4 h		30	1-100 µM	Dose range: 0.01 nM - 100 µM
407	4679	508	Yeast	Yeast	rtER		*In vitro*	Lab		4 h		30	1-100 µM	Dose range: 0.01 nM - 100 µM
407	4680	426	Yeast	Yeast	rtER		*In vitro*	Lab		4 h		30	1-100 µM	Dose range: 0.01 nM - 100 µM
407	4681	250	Yeast	Yeast	rtER		*In vitro*	Lab		4 h		30	1-100 µM	Dose range: 0.01 nM - 100 µM
200	3275	413	Yeast	Yeast (DY150)	hER		*In vitro*	Lab		18 h			10 µM	
200	3278	383	Yeast	Yeast (DY150)	hER		*In vitro*	Lab		18 h			10 µM	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
200	3281	382	Yeast	Yeast (DY150)	hER		*In vitro*	Lab		18 h			10 µM	
200	3284	157	Yeast	Yeast (DY150)	hER		*In vitro*	Lab		18 h			10 µM	
200	3271	532	Yeast	Yeast (Saccharomyces)	hER		*In vitro*	Lab		72 h			1 µM - 10 mM	
200	3272	532	Yeast	Yeast (Saccharomyces)	rtER		*In vitro*	Lab		4 h		28	10 µM	
200	3273	413	Yeast	Yeast (Saccharomyces)	hER		*In vitro*	Lab		72 h			0.1-1 µM	
200	3274	413	Yeast	Yeast (Saccharomyces)	rtER		*In vitro*	Lab		4 h		28	10 µM	
200	3276	383	Yeast	Yeast (Saccharomyces)	hER		*In vitro*	Lab		72 h			0.5-100 nM	
200	3277	383	Yeast	Yeast (Saccharomyces)	rtER		*In vitro*	Lab		4 h		28	10 µM	
200	3279	382	Yeast	Yeast (Saccharomyces)	hER		*In vitro*	Lab		72 h			10 fM - 0.1 µM	
200	3280	382	Yeast	Yeast (Saccharomyces)	rtER		*In vitro*	Lab		4 h		28	10 µM	
200	3282	157	Yeast	Yeast (Saccharomyces)	hER		*In vitro*	Lab		72 h			2-200 µM	
200	3283	157	Yeast	Yeast (Saccharomyces)	rtER		*In vitro*	Lab		4 h		28	10 µM	
200	3285	355	Yeast	Yeast (Saccharomyces)	hER		*In vitro*	Lab		72 h			5-1000 µM	
200	3286	355	Yeast	Yeast (Saccharomyces)	rtER		*In vitro*	Lab		4 h		28	10 µM	
200	3287	531	Yeast	Yeast (Saccharomyces)	hER		*In vitro*	Lab		72 h			20-200 µM	
200	3288	529	Yeast	Yeast (Saccharomyces)	rtER		*In vitro*	Lab		4 h		28	10 µM	
200	3289	65	Yeast	Yeast (Saccharomyces)	rtER		*In vitro*	Lab		4 h		28	10 µM	
200	3290	279	Yeast	Yeast (Saccharomyces)	rtER		*In vitro*	Lab		4 h		28	10 µM	
200	3291	242	Yeast	Yeast (Saccharomyces)	rtER		*In vitro*	Lab		4 h		28	10 µM	
200	3292	226	Yeast	Yeast (Saccharomyces)	rtER		*In vitro*	Lab		4 h		28	10 µM	
363	4472	227	Yeast	Yeast strain 188R1	hER		*In vitro*	Lab		4 h		30	1-100 µM	Yeast two-plasmid system; dose range: 0.1 pM - 100 µM

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
363	4473	228	Yeast	Yeast strain 188R1	hER		*In vitro*	Lab		4 h		30	1-100 µM	Yeast two-plasmid system; dose range: 0.1 pM - 100 µM
363	4474	225	Yeast	Yeast strain 188R1	hER		*In vitro*	Lab		4 h		30	1-100 µM	Yeast two-plasmid system; dose range: 0.1 pM - 100 µM
363	4478	260	Yeast	Yeast strain 188R1	hER		*In vitro*	Lab		4 h		30	1 nM - 100 µM	Yeast two-plasmid system; dose range: 0.1 pM - 100 µM
363	4479	747	Yeast	Yeast strain 188R1	hER		*In vitro*	Lab		4 h		30	1 nM - 100 µM	Yeast two-plasmid system; dose range: 0.1 pM - 100 µM
363	4480	748	Yeast	Yeast strain 188R1	hER		*In vitro*	Lab		4 h		30	1 nM - 100 µM	Yeast two-plasmid system; dose range: 0.1 pM - 100 µM
363	4484	749	Yeast	Yeast strain 188R1	hER		*In vitro*	Lab		4 h		30	10-100 µM	Yeast two-plasmid system; dose range: 0.1-100 µM
363	4485	750	Yeast	Yeast strain 188R1	hER		*In vitro*	Lab		4 h		30	10-100 µM	Yeast two-plasmid system; dose range: 0.1-100 µM
363	4486	751	Yeast	Yeast strain 188R1	hER		*In vitro*	Lab		4 h		30	10-100 µM	Yeast two-plasmid system; dose range: 0.1-100 µM
363	4487	448	Yeast	Yeast strain 188R1	hER		*In vitro*	Lab		4 h		30	10-100 µM	Yeast two-plasmid system; dose range: 0.1-100 µM
363	4488	449	Yeast	Yeast strain 188R1	hER		*In vitro*	Lab		4 h		30	10-100 µM	Yeast two-plasmid system; dose range: 0.1-100 µM
363	4489	752	Yeast	Yeast strain 188R1	hER		*In vitro*	Lab		4 h		30	10-100 µM	Yeast two-plasmid system; dose range: 0.1-100 µM
363	4490	753	Yeast	Yeast strain 188R1	hER		*In vitro*	Lab		4 h		30	10-100 µM	Yeast two-plasmid system; dose range: 0.1-100 µM
363	4491	375	Yeast	Yeast strain 188R1	hER		*In vitro*	Lab		4 h		30	10-100 µM	Yeast two-plasmid system; dose range: 0.1-100 µM

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
363	4475	227	Yeast	Yeast strain BJ3505	hER		*In vitro*	Lab		16 h		4	0.1-100 µM	Competitive radioligand assay using extracts from yeast transformed with hER; dose range: 0.1 pM - 100 µM
363	4476	228	Yeast	Yeast strain BJ3505	hER		*In vitro*	Lab		16 h		4	0.1-100 µM	Competitive radioligand assay using extracts from yeast transformed with hER; dose range: 0.1 pM - 100 µM
363	4477	225	Yeast	Yeast strain BJ3505	hER		*In vitro*	Lab		16 h		4	1-100 µM	Competitive radioligand assay using extracts from yeast transformed with hER; dose range: 0.1 pM - 100 µM
363	4481	260	Yeast	Yeast strain BJ3505	hER		*In vitro*	Lab		16 h		4	1 nM - 100 µM	Competitive radioligand assay using extracts from yeast transformed with hER; dose range: 0.1 pM - 100 µM
363	4482	747	Yeast	Yeast strain BJ3505	hER		*In vitro*	Lab		16 h		4	1 nM - 100 µM	Competitive radioligand assay using extracts from yeast transformed with hER; dose range: 0.1 pM - 100 µM
363	4483	748	Yeast	Yeast strain BJ3505	hER		*In vitro*	Lab		16 h		4	1 nM - 100 µM	Competitive radioligand assay using extracts from yeast transformed with hER; dose range: 0.1 pM - 100 µM
158	2819	242	Yeast	Yeast strain hER-ERE	ER		*In vitro*	Lab		Overnight			EC50 = 200 nM	
158	2820	277	Yeast	Yeast strain hER-ERE	ER		*In vitro*	Lab		Overnight			EC50 = 200 nM	
158	2821	383	Yeast	Yeast strain hER-ERE	ER		*In vitro*	Lab		Overnight			EC50 = 0.2 nM	
190	3124	242	Yeast	Yeast strain hER-ERE	ER		*In vitro*	Lab		Overnight			0.1-10 µM	
190	3125	465	Yeast	Yeast strain hER-ERE	ER		*In vitro*	Lab		Overnight			1-10 µM	
190	3126	359	Yeast	Yeast strain hER-ERE	ER		*In vitro*	Lab		Overnight			0.1-10 µM	
190	3127	264	Yeast	Yeast strain hER-ERE	ER		*In vitro*	Lab		Overnight			1-10 µM	
190	3128	497	Yeast	Yeast strain hER-ERE	ER		*In vitro*	Lab		Overnight			10 µM	
190	3129	237	Yeast	Yeast strain hER-ERE	ER		*In vitro*	Lab		Overnight			10 µM	

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
190	3130	370	Yeast	Yeast strain hER-ERE	ER		*In vitro*	Lab		Overnight			0.1-10 µM	
419	4797	377	Yeast	Yeast strain hER-ERE	hER		*In vitro*	Lab		Overnight		30	1 nM - 100 µM	Dose range: 1 pM - 100 µM
419	4798	754	Yeast	Yeast strain hER-ERE	hER		*In vitro*	Lab		Overnight		30	1 nM - 100 µM	Dose range: 1 pM - 100 µM
419	4799	376	Yeast	Yeast strain hER-ERE	hER		*In vitro*	Lab		Overnight		30	10 nM - 100 µM	Dose range: 1 pM - 100 µM
419	4800	449	Yeast	Yeast strain hER-ERE	hER		*In vitro*	Lab		Overnight		30	5-100 µM	Dose range: 1 pM - 100 µM
419	4801	448	Yeast	Yeast strain hER-ERE	hER		*In vitro*	Lab		Overnight		30	5-100 µM	Dose range: 1 pM - 100 µM
419	4802	782	Yeast	Yeast strain hER-ERE	hER		*In vitro*	Lab		Overnight		30	5-100 µM	Dose range: 1 pM - 100 µM
419	4803	451	Yeast	Yeast strain hER-ERE	hER		*In vitro*	Lab		Overnight		30	5-100 µM	Dose range: 1 pM - 100 µM
419	4804	453	Yeast	Yeast strain hER-ERE	hER		*In vitro*	Lab		Overnight		30	5-100 µM	Dose range: 1 pM - 100 µM
419	4805	451	Yeast	Yeast strain hER-ERE	hER		*In vitro*	Lab		Overnight		30	IC 50 = 500 nM	
419	4806	453	Yeast	Yeast strain hER-ERE	hER		*In vitro*	Lab		Overnight		30	IC 50 = 10 µM	
419	4807	782	Yeast	Yeast strain hER-ERE	hER		*In vitro*	Lab		Overnight		30	IC 50 = 2 µM	
164	2965	65	Yeast	Yeast strain hPR-PRE	PR		*In vitro*	Lab		Overnight			IC50 = 500 nM	Concentration range: 100 nM - 3 µM
164	2966	277	Yeast	Yeast strain hPR-PRE	PR		*In vitro*	Lab		Overnight			IC50 = 1 µM	Concentration range: 100 nM - 10 µM
164	2967	356	Yeast	Yeast strain hPR-PRE	PR		*In vitro*	Lab		Overnight			IC50 = 2.5 µM	Concentration range: 100 nM - 3 µM
164	2968	65	Yeast	Yeast strain hPR-PRE	PR		*In vitro*	Lab		Overnight			IC50 = 250 nM	Concentration range: 100 nM - 1 µM
164	2969	277	Yeast	Yeast strain hPR-PRE	PR		*In vitro*	Lab		Overnight			IC50 =750 µM	Concentration range: 100 nM - 5 µM
164	2970	356	Yeast	Yeast strain hPR-PRE	PR		*In vitro*	Lab		Overnight			IC50 = 350 µM	Concentration range: 100 nM - 1 µM
220	3476	277	Yeast	Yeast strain PCY2	hER		*In vitro*	Lab		Overnight			EC50 = 0.43 µM	
220	3477	157	Yeast	Yeast strain PCY2	hER		*In vitro*	Lab		Overnight			EC50 = 3.09 µM	
220	3478	242	Yeast	Yeast strain PCY2	hER		*In vitro*	Lab		Overnight			EC50 = 6.47 µM	
220	3482	277	Yeast	Yeast strain PCY2	hER		*In vitro*	Lab					IC50 = 1.72 µM	Yeast whole cell competition binding assay
220	3483	157	Yeast	Yeast strain PCY2	hER		*In vitro*	Lab					IC50 = 71 µM	Yeast whole cell competition binding assay

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
220	3484	242	Yeast	Yeast strain PCY2	hER		*In vitro*	Lab					up to 140 µM	Yeast whole cell competition binding assay
220	3485	415	Yeast	Yeast strain PCY2	hER		*In vitro*	Lab					up to 140 µM	Yeast whole cell competition binding assay
220	3486	415	Yeast	Yeast strain PCY2	hER		*In vitro*	Lab		Overnight			up to 140 µM	
232	3626	383	Yeast	Yeast strain PGKhAR	hAR		*In vitro*	Lab		Overnight			1-50 µM	
232	3627	245	Yeast	Yeast strain PGKhAR	hAR		*In vitro*	Lab		Overnight			10-30 µM	
232	3628	358	Yeast	Yeast strain PGKhAR	hAR		*In vitro*	Lab		Overnight			100 µM	
232	3629	65	Yeast	Yeast strain PGKhAR	hAR		*In vitro*	Lab		Overnight			2 µM	
232	3631	595	Yeast	Yeast strain PGKhAR	hAR		*In vitro*	Lab		Overnight			1-50 µM	
232	3632	157	Yeast	Yeast strain PGKhAR	hAR		*In vitro*	Lab		Overnight			5-50 µM	
232	3633	279	Yeast	Yeast strain PGKhAR	hAR		*In vitro*	Lab		Overnight			1-20 µM	
232	3634	242	Yeast	Yeast strain PGKhAR	hAR		*In vitro*	Lab		Overnight			5-50 µM	
232	3635	423	Yeast	Yeast strain PGKhAR	hAR		*In vitro*	Lab		Overnight			5-10 µM	
220	3479	277	Yeast	Yeast strain RS188N	hER		*In vitro*	Lab		Overnight			EC50 = 0.70 µM	
220	3480	157	Yeast	Yeast strain RS188N	hER		*In vitro*	Lab		Overnight			EC50 = 2.15 µM	
220	3481	242	Yeast	Yeast strain RS188N	hER		*In vitro*	Lab		Overnight			EC50 = 23.8 µM	
220	3487	415	Yeast	Yeast strain RS188N	hER		*In vitro*	Lab		Overnight			up to 140 µM	
311	4253	677	Yeast	Yeast strain Y190	hERalpha		*In vitro*	Lab		4 h		30	10 µM	Yeast two-hybrid assay
311	4254	390	Yeast	Yeast strain Y190	hERalpha		*In vitro*	Lab		4 h		30	10 µM	Yeast two-hybrid assay
311	4255	678	Yeast	Yeast strain Y190	hERalpha		*In vitro*	Lab		4 h		30	10 µM	Yeast two-hybrid assay
311	4256	679	Yeast	Yeast strain Y190	hERalpha		*In vitro*	Lab		4 h		30	10 µM	Yeast two-hybrid assay
311	4257	680	Yeast	Yeast strain Y190	hERalpha		*In vitro*	Lab		4 h		30	10 µM	Yeast two-hybrid assay
311	4258	681	Yeast	Yeast strain Y190	hERalpha		*In vitro*	Lab		4 h		30	10 µM	Yeast two-hybrid assay
311	4259	682	Yeast	Yeast strain Y190	hERalpha		*In vitro*	Lab		4 h		30	10 µM	Yeast two-hybrid assay

Ref ID	Endocr ID	Chem ID	Group	Organism	Tissue	Age	*InVivo*	Lab	Flow	Duration	Route	T (°C)	Concentration	Notes
311	4260	683	Yeast	Yeast strain Y190	hERalpha		*In vitro*	Lab		4 h		30	10 µM	Yeast two-hybrid assay
311	4261	383	Yeast	Yeast strain Y190	hERalpha		*In vitro*	Lab		4 h		30	10 µM	Yeast two-hybrid assay
311	4262	65	Yeast	Yeast strain Y190	hERalpha		*In vitro*	Lab		4 h		30	10 µM	Yeast two-hybrid assay
311	4263	423	Yeast	Yeast strain Y190	hERalpha		*In vitro*	Lab		4 h		30	1 µM	Yeast two-hybrid assay
206	3343	383	Yeast	Yeast strain YRG-2	hER		*In vitro*	Lab		Overnight		30	0.1 nM - 1 µM	
206	3344	242	Yeast	Yeast strain YRG-2	hER		*In vitro*	Lab		Overnight		30	0.01-10 µM	
206	3345	278	Yeast	Yeast strain YRG-2	hER		*In vitro*	Lab		Overnight		30	0.01-10 µM	Mixture: ring and chain isomers (purity: 990%)
206	3346	154	Yeast	Yeast strain YRG-2	hER		*In vitro*	Lab		Overnight		30	1-100 µM	
206	3347	537	Yeast	Yeast strain YRG-2	hER		*In vitro*	Lab		Overnight		30	1-100 µM	

Chem ID	Chemical Name Dutch	Chemical Name English	CAS	UN	Chemical Formula	Mol weight	Boiling Point	Melting Point	Density	Pressure	Solubility	Log Kow	Notes	Ph	P	D	A
1	Diethylamine	Diethylamine	109-89-7	1154	C4H11N	73.14	55.5	-50°C	0.7074 at 20°C	260 hPa at 20°C	815 g/l at 14°C	0.57		L			
2	Diisopropylamine	Diisopropylamine	108-18-9	1158	C6H15N	101.19	84°C	-61°C	0.722 at 22°C	70 mm Hg at 20°C	-	1.84		L			
3	Diethyleenglycol	Diethyleneglycol	111-46-6	-	C4H10O3	106.12	245°C	-10°C	1.118	<0.01 mm Hg at 20°C	10-50 mg/ml at 18°C	-1.98		L			
4	Diethyleenglycol-monomethylether	Diethyleneglycol-monomethylether	111-77-3	-	C5H12O3	120.15	194°C	-70°C	1.025 at 20°C	0.25 mm Hg at 25°C	>100 mg/ml at 19°C	-1.14		L			
5	Diethyleentriamine	Diethylenetriamine	111-40-0	2079	C4H13N3	103.18	205°C	-39°C	0.95 at 20°C	0.2 mm Hg at 20°C	Very soluble	-1.3		L			
6	Diisobutylketon	Diisobutylketone	108-83-8	1157	C9H18O	142.27	166°C	-46.4	0.81 at 20°C	1.7 mm Hg at 20°C	500 mg/l	-		L			
7	Diisopropanolamine	Diisopropanolamine	110-97-4	-	C6H15NO2	133.22	249°C	42°C	0.99	0.02 mm Hg at 42°C	870 g/l	0.79		L			
8	Diisopropylether	Diisopropylether	108-20-3	1159	C6H14O	102.2	69°C	-86°C	0.73 at 10°C	130 mm Hg at 20°C	9 g/l at 20°C	-		L			
9	Dimethylamine	Dimethylamine	124-40-3	1032	C2H7N	45.10	7.4°C	-93°C	0.937 at 17°C	2.06 hPa at 20°C	Very soluble	-0.38		L			
10	Dinitrofenol	Dinitrophenol	25550-58-7	-	C6H4N2O5	184.12	-	-	-	-	-	-		S	N		
11	1,4-Dioxaan	1,4-Dioxane	123-91-1	1165	C4H8O2	88.11	101°C	11.8°C	1.03	30 mm Hg at 20°C	>100 mg/ml at 20°C	-0.42		L			
12	Difenylether	Diphenylether	101-84-8	-	C12H10O	170.20	257-259°C	28°C	1.07 at 20°C	0.02 mm Hg at 20°C	21 mg/l at 25°C	4.20 at 20°C		S			
13	Epichloorhydrine	Epichlorohydrine	106-89-8	2023	C3H5ClO	92.53	117.9°C	-25.6	1.182 at 18.5°C	13 mm Hg at 20°C	60 g/l at 20°C	0.45		L			
14	Ethanolamine	Ethanolamine	141-43-5	2491	C2H7NO	61.08	172°C	11°C	1.02 at 20°C	0.4 mm Hg at 20°C	-	-1.31		L			

Chem ID	Chemical Name Dutch	Chemical Name English	CAS	UN	Chemical Formula	Mol weight	Boiling Point	Melting Point	Density	Pressure	Solubility	Log Kow	Notes	Ph	P	D	A
15	Ethylacetoacetaat	Ethylacetoacetate	141-97-9	-	C6H10O3	130.16	180-181°C	-80°C (enol); -39°C (keto)	1.02 at 20°C	0.8 mm Hg at 20°C	-	0.27		L			
16	Ethylacrylaat	Ethylacrylate	140-88-5	1917	C5H8O2	100.12	99.8°C	-71.2°C	0.924 at 20°C	29 mm Hg at 20°C	20 g/l	1.18		L			
17	Ethylmethacrylaat	Ethylmethacrylate	97-63-2	2277	C6H10O2	114.15	117°C	-75°C	0.917	-	5-10 mg/ml at 20°C	-		L			
18	Methylethylketon (2-Butanon)	Methylethylketone (2-Butanone)	78-93-3	1193	C4H8O	72.11	79.6	-86.3	0.806 at 20°C	77.5 mm Hg at 20°C	>100 mg/ml at 20°C	0.26		L			
19	Ethylamine	Ethylamine	75-04-7	1036	C2H7N	45.08	17°C	-81°C	0.71 at 0°C	1.2 atm at 20°C	-	-0.27		L			
21	Ethyleenglycol-monoethylether	Ethyleneglycol-monoethylether	110-80-5	1171	C4H10O2	90.14	135°C	-	0.93 at 20°C	3.8 mm Hg at 20°C	-	-0.43		L			
22	Ethyleenglycol-monomethylether	Ethyleneglycol-monomethylether	109-86-4	1188	C3H8O2	76.1	124°C	-85°C	0.97 at 20°C	6.2 mm Hg at 20°C	-	< 1		L			
23	Ethyleenoxide	Ethyleneoxide	75-21-8	1040	C2H4O	44.05	10.7°C	-111°C	0.869	1.095 mm Hg at 20°C	Miscible	-0.52		L or G			
24	Mierezuur	Formic acid	64-18-6	1779	CH2O2	46.02	100.7°C	8.4°C	1.22 at 20°C	35 mm Hg at 20°C	Miscible	-0.54		L			
25	Furfurylalcohol	Furfuryl alcohol	98-00-0	2874	C5H6O2	98.10	170°C	-31°C	1.13 at 20°C	0.4 mm Hg at 20°C	>100 mg/ml at 23°C	-		L			
26	Heptaan	Heptane	142-82-5	1206	C7H16	100.20	98°C	-91°C	0.68 at 20°C	35 mm Hg at 20°C	3 mg/l at 20°C	4.66		L			
27	Zoutzuur	Hydrochloric acid	7647-01-0	1789	HCl	36.46	108.58°C	-	1.096 at 15°C	-	-	-		L			
28	Waterstofperoxyde	Hydrogen peroxide	7722-84-1	2015	H2O2	34.02	150.2°C	-0.41°C	1.4067 at 20°C	-	>100 mg/ml at 22°C	-		L			

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29	Isoamylacetaat	Isoamylacetate	123-92-2	1104	C7H14O2	130.18	142°C	-78.5°C	-	-	<1mg/ml at 20°C	-		L			
30	Isobutylacetaat	Isobutylacetate	110-19-0	1213	C6H12O2	116.20	116°C	-98.9	0.87	20 mm Hg at 25°C	6.3 g/l at 25°C	-		L			
31	Isodecanol (Isodecyl alcohol)	Isodecanol (Isodecyl alcohol)	25339-17-7	1987	C10H22O	158.32	-	-	-	-	-	-		L			
32	Isoforone	Isophorone	78-59-1	1993	C9H14O	138.21	-	-	-	-	-	-		L			
33	Isopropylacetaat	Isopropylacetate	108-21-4	1220	C5H10O2	102.15	90°C	-73.4°C	0.88 at 16°C	47.5 mm Hg at 20°C	18 g/l at 20°C	-		L			
34	Isopropylamine	Isopropylamine	75-31-0	1221	C3H9N	59.11	32°C	-101°C	0.69 at 20°C	460 mm Hg at 20°C	-	-		L			
35	Isopropylbenzeen	Isopropylbenzene	98-82-8	1918	C9H12	120.21	152.7°C	-96°C	0.86	3.2 mm Hg at 20°C	50 mg/l at 20°C	3.66		L			
36	Lood(II)sulfaat	Lead(II)sulfate	7446-14-2	1794	O4S.Pb	303.26	-	1170°C	6.2	-	-	-		S			
37	Kwik(II)acetaat	Mercuric acetate	1600-27-7	-	C4H6HgO4	318.68	-	178-180°C	3.28	-	400 mg/ml	-		S			
38	m-Xyleen	m-Xylene	108-38-3	1307	C8H10	106.18	139.1°C	-47.87°C	0.8684at 15°C	6 mm Hg at 20°C	Insoluble	3.20		L			
39	Methylacrylaat	Methylacrylate	96-33-3	1919	C4H6O2	86.09	80.5°C	-76.5°C	0.956 at 20°C	70 mm Hg at 20°C	52 g/l	0.74		L			
41	Methylchloride	Methylchloride	74-87-3	1063	CH3Cl	50.49	-24.2°C	-97°C	0.92 at 20°C	5 atm at 20°C	6.5 g/l at 30°C	0.91		G			
42	Methylamylalcohol (Methylisobutyl-carbinol)	Methylamylalcohol (Methylisobutyl-carbinol)	108-11-2	2053	C6H14O	102.20	132°C	-90°C	0.81 at 20°C	5 mm Hg at 20°C	17 g/l at 20°C	-		L			
43	Methylisobutylketon	Methylisobutylketone	108-10-1	1245	C6H12O	100.18	116°C	-85°C	0.8017 at 20°C	6 mm Hg at 20°C	17-20 g/l at 20°C	1.39		L			

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45	Methylamine	Methylamine	74-89-5	1061	CH5N	31.06	-6.5°C	-92.5°C	-	3.1 atm at 20°C	-	-		G			
46	Morfoline	Morpholine	110-91-8	2054	C4H9NO	87.12	128.9°C	-4.9°C	1 at 20°C	8 mm Hg at 20°C	-	-2.55 at pH 7		L			
47	n-Amylalcohol (n-pentanol)	n-Amylalcohol (n-pentanol)	71-41-0	1105	C5H12O	88.15	137.8°C	-79°C	0.815	2.8 mm Hg at 20°C	27 g/l at 22°C	1.40		L			
48	n-Butanol (n-Butylalcohol)	n-Butanol (n-Butylalcohol)	71-36-3	1120	C4H10O	74.12	117.7°C	-89.9°C	0.81 at 20°C	4.4 mm Hg at 20°C	77 g/l	0.88		L			
49	n-Butylacetaat	n-Butylacetate	123-86-4	1123	C6H12O2	116.18	126.5°C	-77.9°C	0.88 at 20°C	10 mm Hg at 20°C	14 g/l at 20°C	1.81		L			
50	n-Butylacrylaat	n-Butylacrylate	141-32-2	2348	C7H12O2	128.17	146-148°C	-64.6°C	0.89 at 20°C	4 mm Hg at 20°C	1.6 g/l at 20°C	2.38		L			
51	n-Butylamine	n-Butylamine	109-73-9	1125	C4H11N	73.14	78°C	-50°C	0.74	72 mm Hg at 20°C	<1 mg/ml at 20°C	0.81		L			
52	n-Butylmethacrylaat	n-Butylmethacrylate	97-88-1	2227	C8H14O2	142.20	163.5-170.5°C	<-50°C	0.89	-	Insoluble	-		L			
53	Boterzuur	n-Butyric acid	107-92-6	2820	C4H8O2	88.12	162°C	-5°C	0.964	0.43 mm Hg at 20°C	>100 mg/ml at 19°C	0.79		L			
54	1-Decanol (n-Decylalcohol)	1-Decanol (n-Decylalcohol)	112-30-1	-	C10H22O	158.28	231°C	-7°C	-	1 mm Hg at 70°C	37 mg/l at 25°C	4.11		L			
55	1-Hepteen	1-Heptene	592-76-7	2278	C7H14	98.19	94°C	-119°C	-	160 hPa at 20°C	-	-		L			
56	n-Hexaan	n-Hexane	110-54-3	1208	C6H14	86.17	68.7°C	-94.6°C	0.66 at 20°C	120 mm Hg at 20°C	<1 mg/ml at 16.5°C	4		L			
57	n-Hexanol	n-Hexanol	111-27-3	2282	C6H14O	102.20	158°C	-51°C	0.82 at 20°C	0.98 mm Hg at 20°C	5.9 g/l at 20°C	2.03		L			
58	n-Pentaan	n-Pentane	109-66-0	1265	C5H12	72.15	36.1°C	-130°C	0.63 at 20°C	430 mm Hg at 20°C	<1 mg/ml at 21°C	2.36		L			

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59	n-Propylacetaat	n-Propylacetate	109-60-4	1276	C5H10O2	102.13	102°C	-95°C	0.89 at 20°C	25 mm Hg at 20°C	18.9 g/l at 20°C	1.39		L			
60	Nafta (Benzin)	Naphta (Benzin)	8030-30-6	1256	-	-	-	-	-	-	-	-		L			
61	Nafteenzuur	Naphthenic acid	1338-24-5	3082	-	-	-	-	-	-	-	-		L			
62	Nitrobenzeen	Nitrobenzene	98-95-3	1662	C6H5NO2	123.12	210.8°C	5.7°C	1.20 at 20°C	0.15 mm Hg at 20°C	1.9 g/l at 20°C	1.88		L			
63	Nitroethaan	Nitroethane	79-24-3	2842	C2H5NO2	75.08	115°C	-90°C	1.04	-	-	0.18		L			
64	Nitromethaan	Nitromethane	75-52-5	1261	CH3NO2	61.05	101.2°C	-29°C	1.1371	27.8 mm Hg at 20°C	90-100 mg/l	0.17		L			
65	4-Nonylfenol (p-Nonylfenol)	4-Nonylphenol (p-Nonylphenol)	104-40-5	3082	C15H24O	220,39	315°C	-	0,95	-	Practically insoluble	4.5		L	N		Y
66	n-Octaan	n-Octane	111-65-9	1262	C8H18	114.23	125.7°C	-56.5°C	0.70 at 25°C	11 mm Hg at 20°C	0.66 mg/l at 20°C	-		L			
67	1-Octanol	1-Octanol	111-87-5	1987	C8H18O	130.23	195°C	-17°C	0.82 at 20°C	1 mm Hg at 54°C	300 mg/l at 20°C	2.8		L			
68	Oleïnezuur	Oleic acid	112-80-1	-	C18H34O2	282.52	360°C	14°C	0.89	1 mm Hg at 177°C	Insoluble	-		L			
69	o-Nitrofenol	o-Nitrophenol	88-75-5	1663	C6H5NO3	139.11	214-216°C	45-46°C	1.495 at 20°C	20 mm Hg at 105°C	2.1 g/l at 20°C	1.69		S			
70	o-Toluïdine	o-Toluïdine	95-53-4	1708	C7H9N	107.16	200-202°C	-16.3°C	1.008 at 20°C	0.1 mm Hg at 20°C	15 g/l at 25°C	1.29		L			
71	o-Xyleen	o-Xylene	95-47-6	1307	C8H10	106.17	143-145°C	-25--23°C	0.88 at 20°C	5 mm At 20°C	Insoluble	2.77		L			
72	Oxaalzuur	Oxalic acid	144-62-7	-	C2H2O4	90.04	150°C	189°C	1.65	0.0003 mm Hg at 30°C	95 g/l at 15°C	-0.81		S			
73	p-Cymeen	p-Cymene	99-87-6	2046	C10H14	134.22	176-178°C	-68°C	0.86	-	-	-		L			

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74	p-Xyleen	p-Xylene	106-42-3	1307	C8H10	106.17	138.3°C	13.3°C	0.86 at 20°C	6.5 mm Hg at 20°C	198 mg/l at 25°C	3.15		L			
75	Ftaalzuuranhydride	o-Phtalic anhydride	85-44-9	2214	C8H4O3	148.12	295°C	130.8°C	1.53 at 4°C	0.0002 mm Hg at 20°C	Decomposes	0.73		S			
76	Polypropyleenglycol	Polypropyleneglycol	25322-69-4	-	(C3H6O)xH2O	-	-	-	-	-	-	-		L			
77	Kaliumhydroxide	Potassiumhydroxide	1310-58-3	1813	KOH	56.11	1320°C	360°C	2.044 at 20°C	-	1.07 g/l at 15°C	-		S			
78	Propionaldehyde	Propionaldehyde	123-38-6	1275	C3H6O	58.08	48.8°C	-81°C	0.807 at 20°C	235 mm Hg at 20°C	200 g/l at 20°C	0.83		L			
79	Propionzuur	Propionic acid	79-09-4	1848	C3H6O2	74.09	140.7°C	-21.5°C	0.993	2.9 mm Hg at 20°C	>100 mg/ml	0.25		L			
80	Propyleenoxide (Propeenoxide)	Propyleneoxide (Propeneoxide)	75-56-9	1280	C3H6O	58.08	34°C	-104.4°C	0.86 at 0°C	400 mm Hg at 18°C	650g/l at 30°C	-		L			
82	Natriumcacodylaat	Sodiumcacodylate	124-65-2	1688	C2H6AsNaO2	159.99	-	-	-	-	2 kg/l	-		S			
83	Natriumhydroxide	Sodiumhydroxide	1310-73-2	1823	NaOH	40	-	318°C	2.13 at 25°C	-	1.11 kg/l	-		S			
84	Natriumsilicaat	Sodiumsilicate	1344-09-8	-	Na2SiO3	122.07	-	1089°C	2.614	-	-	-		S			
86	tert-Butylamine	tert-Butylamine	75-64-9	1125	C4H11N	73.16	44.4°C	-67.5°C	0.70	-	-	-		L			
87	Zwaveldioxide	Sulfurdioxide	7446-09-5	1079	SO2	64.06	-	-	-	-	-	-		G			
88	Zwavelzuur	Sulfuric acid	7664-93-9	1832	H2SO4	98.08	290°C	10°C	1.84	-	-	-		L			
89	Sulfotep (Tetraethyl-dithiopyrofosfaat)	Sulfotep (Tetraethyl-dithiopyrophosphate)	3689-24-5	1704	C8H20O5P2S2	322.32	138°C at 2 mm Hg	-	1.19	1.7E-4 mm Hg at 20°C	25-66 mg/l at 20°C	-		L			
90	Tetraethyllood	Tetraethyllead	78-00-2	1649	C8H20Pb	323.45	200°C	136°C	1.659	0.15 mm Hg at 20°C	<1 mg/ml at 21°C	-		L			
91	Tetrahydrofuraan (Diethyleenoxide)	Tetrahydrofuran (Diethyleneoxide)	109-99-9	2056	C4H8O	72.11	66°C	-108.5°C	0.888 at 20°C	0.173 atm at 20°C	>100 mg/ml at 20°C	-		L			

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92	1,2,3,4-Tetrahydro-naftaleen	1,2,3,4-Tetrahydro-naphtalene	119-64-2	-	C10H12	132.20	207°C	-35°C	0.97	0.3 mm Hg at 20°C	-	-		L			
93	Tetramethyllood	Tetramethyllead	75-74-1	1649	C4H12Pb	267.35	110°C	-27.5°C	9.2	22.5 mm Hg at 20°C	Insoluble	-		L			
94	Thioglycolzuur (Mercaptoazijnzuur)	Thioglycolic acid (Mercaptoacetic acid)	68-11-1	1940	C2H4O2S	92.11	104°C at 11 mm Hg	-16.5°C	1.30 at 20°C	10 mm Hg at 18°C	-	-		L			
95	Triethanolamine	Triethanolamine	102-71-6	1760	C6H15NO3	149.19	335.4°C	21.6°C	1.126	>0.01 mm Hg at 20°C	>100 mg/ml at 22°C	-2.3		L			
96	Triethylamine	Triethylamine	121-44-8	1296	C6H15N	101.22	89.3°C	-114.7°C	0.723 at 25°C	50 mm Hg at 20°C	15 g/l at 20°C	1.44		L			
97	Trimethylamine	Trimethylamine	75-50-3	1083	C3H9N	59.11	3.5°C	-117°C	0.662 at -5°C	1.9 atm at 20°C	-	-		G			
98	n-Valeraldehyde	n-Valeraldehyde	110-62-3	2058	C5H10O	86.13	103°C	-91°C	0.82 at 11°C	50 mm Hg at 25°C	-	-		L			
99	1,1-Dichloorethyleen (Vinylideenchloride)	1,1-Dichloroethylene (Vinylidene chloride)	75-35-4	1303	C2H2Cl2	96.94	31.7°C	-122.5°C	1.218 at 20°C	500 mm Hg at 20°C	2.5 g/l at 25°C	2.02		L			
100	1-Methylpyrrolidine	1-Methylpyrrolidine	120-94-5	-	C5H11N	85.17	80°C	-90°C	0.82	-	-	-		L			
101	1,1,1-Trichloorethaan	1,1,1-Trichloroethane	71-55-6	2831	C2H3Cl3	133.40	74.1°C	-32.5	1.337 at 20°C	100 mm Hg at 20°C	4.4 g/l at 20°C	2.47		L			
102	1,1,2,2-Tetrachloor-ethaan	1,1,2,2-Tetrachloro-ethane	79-34-5	1702	C2H2Cl4	167.86	146°C	-36°C	1.586	5 mm Hg at 20°C	2.9 g/l at 20°C	2.39		L			
103	1,3,5-Trimethyl-benzeen (Mesityleen)	1,3,5-Trimethyl-benzene (Mesitylene)	108-67-8	2325	C9H12	120.19	164.7°C	-52.7	0.86 at 20°C	-	-	-		L			
104	2-Ethyl-1-hexanol	2-Ethyl-1-hexanol	104-76-7	1987	C8H18O	130.23	184-185°C	-76°C	0.831 at 20°C	0.05 mm Hg at 20°C	1 g/l at 20°C	-		L			
105	2-Ethylhexylacrylaat	2-Ethylhexylacrylate	103-11-7	1760	C11H20O2	184.3	214-218°C	-90°C	-	-	<1 mg/ml at 22°C	-		L			

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106	2-Hydroxyethylacrylaat	2-Hydroxyethylacrylate	818-61-1	-	C5H8O3	116.13	-	-	-	-	-	-		L			
107	2-Methyl-5-ethylpyridine	2-Methyl-5-ethylpyridine	104-90-5	2300	C8H11N	121.18	178°C	-70.9°C	0.92	-	-	2.49		L			
108	2-Nitropropaan	2-Nitropropane	79-46-9	2608	C3H7NO2	89.11	120.3°C	-93°C	0.99	-	>100 mg/ml at 20°C	0.80		L			
110	Ethanol	Ethanol	64-17-5	1170	C2H6O	46.07	78.5°C	-114.1	0.79 at 20°C	43.9 mm Hg at 20°C	>100 mg/ml at 23°C	-0.32		L			
111	Ethylacetaat	Ethylacetate	141-78-6	1173	C4H8O2	88.11	77°C	-83.6°C	0.8945	72.8 mm Hg at 20°C	79 g/l at 20°C	0.66		L			
112	Ethylbenzeen	Ethylbenzene	100-41-4	1175	C8H10	106.16	136.2°C	-95°C	0.866	at 21°C	152 mg/l at 20°C	3.15		L			
113	Ethyleenchloorhydrine (2-Chloorethanol)	Ethylenechlorohydrin (2-Chloroethanol)	107-07-3	1135	C2H5ClO	80.52	128.8°C	-89°C	1.1 at 20°C	4.9 mm Hg at 20°C	-	-		L			
114	Ethyleendichloride	Ethylenedichloride	107-06-2	1184	C2H4Cl2	99	83.5°C	-35.4°C	1.25 at 20°C	61 mm Hg at 20°C	8.69 g/l at 20°C	-		L			
115	Ethyleenglycol	Ethyleneglycol	107-21-1	-	C2H6O2	62,08	197,6°C	-13°C	1,1155 at 20°C	0,05 mm Hg at 20°C	> 100 mg/l at 17,5°C	-1,93		L			
116	Ethyleendiamine	Ethylenediamine	107-15-3	1604	C2H8N2	60.10	116.5°C	8.5°C	0.96 at 21°C	9 mm Hg at 20°C	>100 mg/ml at 17°C	-		L			
117	IJzer(3+)chloride	Ferric chloride	7705-08-0	1773	FeCl3	162.20	315°C	306°C	2.90 at 25°C	-	5-10 mg/ml at20°C	-		S			
118	Furfural	Furfural	98-01-1	1199	C5H4O2	96.09	161.7°C	-36.5°C	1.159 at 20°C	1 mm Hg at 20°C	83 g/l at 20°C	-		L			
119	Glycerine (Glycerol)	Glycerine (Glycerol)	56-81-5	-	C3H8O3	92.09	290°C	17.8°C	1.261 at 20°C	0.0025 mm Hg at 50°C	>100 mg/ml at 18°C	-2.66		L			
120	1-Heptanol	1-Heptanol	111-70-6	1987	C7H16O	116.20	176°C	-34°C	0.82 at 20°C	1 mm Hg at 42°C	2 g/l at 20°C	2.41		L			

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121	Hydrazine	Hydrazine	302-01-2	2030	N2H4	32.05	113.5°C	1.4°C	1.004 at 25°C	-	Miscible	-		L			
122	Isobutanol	Isobutanol	78-83-1	1212	C4H10O	74.14	107.9°C	-108°C	0.80 at 25°C	10 mm Hg at 25°C	95 g/l at 18°C	0.65		L			
123	Isopreen	Isoprene	78-79-5	1218	C5H8	68.11	34°C	-120°C	0.681 at 20°C	493 mm at 20°C	300 mg/l at 20°C	0.50		L			
124	Isopropanol	Isopropanol	67-63-0	1219	C3H8O	60.11	82.5°C	-88.5°C	0.78 at 20°C	32 mm Hg at 20°C	>100 mg/ml at 22°C	-0.16		L			
125	Lood(II)acetaat	Lead(II)acetate	301-04-2	1616	C4H6O4Pb	325.28	-	280°C	2.55	-	10-50 mg/ml at 20°C	-		S			
126	Lood(II)nitraat	Lead(II)nitrate	10099-74-8	1469	N2O6Pb	331.21	-	-	-	-	500g/l	-		S			
128	Kwik(II)chloride	Mercuric chloride	7487-94-7	1624	HgCl2	271.50	302°C	276°C	5.44 at 25°C	-	5-10 mg/ml at 22°C	-		S			
129	Kwik(II)nitraat	Mercuric nitrate	10045-94-0	1625	HgN2O6	324.60	-	-	4.3	-	-	-		S			
130	Methanol	Methanol	67-56-1	1230	CH4O	32.04	65°C	-98°C	0.8 at 15°C	92 mm Hg at 20°C	Miscible	-0.82		L			
131	Methylmethacrylaat	Methylmethacrylate	80-62-6	1247	C5H8O2	100.12	101°C	-48°C	0.9433 at 20°C	28 mm Hg at 20°C	1-10 mg/ml	-		L			
132	N,N-dimethyl-formamide	N,N-dimethyl-formamide	68-12-2	2265	C3H7NO	73.09	149-156°C	-61°C	0.95	22.7 mm Hg at 20°C	>100 mg/ml at 22°C	-0.87		L			
133	Naftaleen	Naphtalene	91-20-3	2304	C10H8	128.17	218°C	80.2°C	1.162 at 20°C	1 mm at 53°C	<1 mg/ml at 22°C	3.32		S			
134	1,2-dichloorbenzeen (o-dichloorbenzeen)	1,2-dichlorobenzene (o-dichlorobenzene)	95-50-1	1591	C6H4Cl2	147	180.5°C	-17°C	1.306 at 20°C	1 mm at 20°C	100 mg/l at 20°C	3.38		L			
135	Fenol	Phenol	108-95-2	-	C6H6O	94,12	182°C	43°C	1,07	0,2 mm Hg at 20°C	82 g/l at 15°C	1,46		S	N		
137	Kaliumcyanide	Potassium cyanide	151-50-8	1680	KCN	65.12	-	634.5°C	1.52	-	-	-		S			

Chem ID	Chemical Name Dutch	Chemical Name English	CAS	UN	Chemical Formula	Mol weight	Boiling Point	Melting Point	Density	Pressure	Solubility	Log Kow	Notes	Ph	P	D	A
138	n-Propanol	n-Propanol	71-23-8	1274	C3H8O	60.09	97.8°C	-127°C	0.80 at 20°C	14.5 mm Hg at 20°C	-	0.34		L			
139	Pyridine	Pyridine	110-86-1	1282	C5H5N	79.10	115°C	-42°C	0.9819 at 20°C	14 mm Hg at 20°C	>100 mg/ml at 21.5°C	0.64		L			
140	Natriumchloraat	Sodiumchlorate	7775-09-9	1495	NaClO3	106.44	-	248°C	2.50	-	-	-		S			
141	Natriumbichromaat	Sodiumdichromate	10588-01-9	1497	Cr2O72Na	261.97	-	-	2.348 at 25°C	-	-	-		S			
142	Vinylacetaat	Vinylacetate	108-05-4	1301	C4H6O2	86.09	73°C	-93.2°C	0.932	83 mm Hg at 20°C	23 g/l at 20°C	0.73		L			
143	Natriumsulfiet	Sodiumsulfite	7757-83-7		Na2O3S	126.04	-	-	-	-	-	-		S			
144	Natriumsulfide	Sodiumsulfide	1313-82-2	1385	Na2S	78.05	-	1180°C (in vacuum)	1.856 at 14°C	-	186 g/l at 20°C	-		S			
146	Tetraethylpyrofosfaat (TEPP)	Tetraethyl-pyrophosphate (TEPP)	107-49-3	1705	C8H20O7P2	290.20	135-138°C at 1 mm Hg	0°C	1.185 at 20°C	1.55E-4 at 20°C	Miscible	-		L			
147	Tolueen	Toluene	108-88-3	1294	C7H8	92.14	110.6°C	-95°C	0.867	22 mm Hg at 20°C	515 mg/l at 20°C	2.69 at 20°C		L			
148	Trichloorethyleen	Trichloroethylene	79-01-6	1710	C2HCl3	131.40	87°C	-73°C	1.46 at 20°C	60 mm Hg at 20°C	1.1 g/l at 25°C	2.42		L			
149	Triethyleenglycol	Triethyleneglycol	112-27-6	-	C6H14O4	150.17	285°C	-4.3°C	1.12	<0.001 mm Hg at 20°C	>100 mg/ml at 20°C	-1.24		L			
150	Uranylnitraat	Uranylnitrate	10102-06-4	2981	N2O8U	394.02	-	-	-	-	-	-		S			
151	Tri-o-cresylfosfaat	Tri-o-cresyl-phosphate	78-30-8	2574	C21H21O4P	368.37	410°C	-30--25°C	1.16 at 25°C	-	0.074 mg/l at 24°C	3.42		L			
152	Benzeen	Benzene	71-43-2	1114	C6H6	78.11	80.1°C	5.5°C	0.905 at 21°C	76 mm Hg at 20°C	1.78 g/l at 20°C	2.64		L			

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153	Benzylalcohol	Benzylalcohol	100-51-6	1993	C7H8O	108.13	205°C	-15.3°C	1.043 at 20°C	0.03 hPa at 20°C	35 g/l at 20°C	1.1		L			
154	Benzylchloride (tris-4-(chlorofenyl)-methaan)	Benzylchloride (tris-4-(chlorophenyl)-methane)	100-44-7	1738	C7H7Cl	126.59	179.3°C	-43°C	1.1 at 18°C	1 mm Hg at 22°C	Reaction	2.30		L			
156	beta-Propiolactone	beta-Propiolactone	57-57-8	-	C3H4O2	72.06	162°C	-33.4°C	1.148 at 20°C	-	10-50 mg/ml at 19°C	-		L			
157	Bisfenol A	Bisphenol A	80-05-7	-	C15 H16 O2	228,29	220°C at 4 mm Hg	150-155°C	1,2	0,2 mm Hg at 170°C	<1 mg/l at 21,5°C	-	Diphenyl alkane	S	N		
158	Butyraldehyde	Butyraldehyde	123-72-8	1129	C4H8O	72.11	75°C	-99°C	0.803 at 20°C	71 mm Hg at 20°C	<1 mg/ml at 19°C	0.83		L			
159	Methylamylacetaat	Methylamylacetate	108-84-9	1233	C8H16O2	144.24	-	-	-	-	-	-		L			
162	Camfor	Camphor	76-22-2	2717	C10H16O	152.24	-	-	-	-	-	-		S			
163	alfa-Caprolactam	alpha-Caprolactam	105-60-2	-	C6H11NO	113.16	266.9°C	69°C	-	0.001 mm Hg at 20°C	>100 mg/ml at 21°C	-		S			
164	Koolstofdisulfide	Carbondisulphide	75-15-0	1131	CS2	76,14	46,5°C	-111,5°C	1,2632	260 mm Hg at 20°C	2,3 mg/l at 22°C	1,84-2,16		L			
165	Tetrachloorkoolstof	Carbontetrachloride	56-23-5	1846	CCl4	153.82	76.7°C	-23°C	1.597 at 20°C	90 mm Hg at 20°C	800 mg/l at 20°C	2.64 at 20°C		L			
166	Chloorbenzeen	Chlorobenzene	108-90-7	1134	C6H5Cl	112.56	132°C	-45°C	1.11 at 20°C	8.8 mm Hg at 20°C	500 mg/l at 20°C	2.84 at 20°C		L			
167	Chloroform	Chloroform	67-66-3	1888	CHCl3	119.38	61.2°C	-63.5°C	1.49 at 20°C	160 mm Hg at 20°C	8 g/l at 20°C	1.97 at 20°C		L			
168	Citroenzuur	Citric acid	77-92-9	-	C6H8O7	192.14	-	153°C	1.542	-	1.33 kg/l	-1.72		S			
169	Koperacetoarseniet	Copper acetoarsenite	12002-03-8	1583	C4H6As6Cu4O16	1013.78	-	-	-	-	<1 mg/ml at 19°C	-		S			

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170	Koper(I)chloride	Copper(I)chloride	7758-89-6	2802	ClCu	98.99	-	430°C	4.14 at 25°C	-	-	-		S			
171	Koper(II)oxide	Copper(II)oxide	1317-38-0	-	CuO	79.54	-	-	-	-	-	-		S			
172	Cresol	Cresol	1319-77-3	2076	C7H8O	108.14	-	-	-	-	-	-		L			
173	Crotonaldehyde	Crotonaldehyde	4170-30-3	1143	C4H6O	70.09	102°C	-76.5°C	0.8516 at 20°C	19 mm hg at 20°C	155 g/l	0.63		L			
174	Cyaanbromide	Cyanogenbromide	506-68-3	1889	CBrN	105.93	61.4°C	52°C	2.01 at 20°C	100 mm Hg at 22.6°C	-	0		S			
175	Cyaanchloride	Cyanogenchloride	506-77-4	1589	CClN	61.48	13°C	-6.5°C	1.22 at 4°C	1000 mm Hg at 20°C	85 g/l at 20°C	0.64		L or G			
176	Cyclohexaan	Cyclohexane	110-82-7	1145	C6H12	84.16	80.7°C	6.5°C	0.779 at 20°C	77 mm at 20°C	55 mg/l at 20°C	-		L			
177	Cyclohexanol	Cyclohexanol	108-93-0	-	C6H12O	100.18	161°C	23°C	0.96	1 mm at 20°C	36 g/l at 20°C	1.23		L			
178	Acetaldehyde	Acetaldehyde	75-07-0	1089	C2H4O	44.06	21°C	-123.5°C	-	740 mm Hg at 20°C	0.1-1 mg/ml	0.43		L			
179	Azijnzuur	Acetic acid	64-19-7	2789	C2H4O2	60.05	118°C	16.6°C	1.053 at 16.67°C	11.4 mm Hg at 20°C	50 g/l at 20°C	-0.31		L			
180	Azijnzuuranhydride	Acetic anhydride	108-24-7	1715	C4H6O3	102.09	139.55	-73.1	1.08	305 mm Hg at 20°C	-	-0.2		L			
181	Aceton	Acetone	67-64-1	1090	C3H6O	58.08	56°C	-94°C	0.786 at 22.7°C	270 mm Hg at 30°C	>100 mg/ml at 22°C	-0.24		L			
182	Acetoncyaanhydrine	Acetonecyanohydrin	75-86-5	-	C4H7NO	58.10	81°C at 23 mm Hg	-19°C	-	0.8 mm Hg at 20°C	-	-		L			
183	Acetonitrile	Acetonitrile	75-05-8	1648	C2H3N	41.05	81.6°C	-45°C	0.7857 at 20°C	74 mm Hg at 20°C	>100 mg/ml at 22.5°C	-0.34		L			

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184	Acetylchloride	Acetylchloride	75-36-5	1717	C2H3ClO	78.50	50.9°C	-112°C	1.1 at 20°C	-	Reaction	-		L			
185	Acroleïne	Acrolein	107-02-8	1092	C3H4O	56.06	53°C	-87°C	0.8389 at 20°C	220 mm Hg at 20°C	>100 mg/ml at 21°C	0.90		L			
186	Acrylamide	Acrylamide	79-06-1	2074	C3H5NO	71.08	-	84.5°C	1.122 at 30°C	2 mm hg at 87°C	2.05 g/l	-		L			
187	Acrylzuur	Acrylic acid	79-10-7	2218	C3H4O2	72.06	141°C	13°C	1.0511 at 20°C	3.2 mm Hg at 20°C	>100 mg/ml at 17°C	0.46		L			
188	Acrylonitrile	Acrylonitrile	107-13-1	1093	C3H3N	53.06	77°C	-83°C	0.8075 at 20°C	100 mm Hg at 23°C	10-50 mg/ml at 21.6°C	-0.92		L			
189	Adiponitrile	Adiponitrile	111-69-3	2205	C6H8N2	108.15	295°C	1°C	0.9676 at 20°C	2 mm Hg at 119°C	50-100 mg/ml at 23°C	-0.42		L			
191	Allylalcohol	Allylalcohol	107-18-6	1098	C3H6O	58.08	97°C	-129°C	0.825 at 20°C	20 mm Hg at 20°C	-	0.17		L			
192	Allylchloride	Allylchloride	107-05-1	1100	C3H5Cl	76.53	45°C	-134.5°C	0.9392 at 20°C	340 mm Hg at 20°c	100 mg/l	-		L			
193	alfa-Pineen	alpha-Pinene	80-56-8	2368	C10H16	136.24	156.2°C	-55°C	0.86 at 20°C	5 mm Hg at 25°C	Insoluble	4.1		L			
194	Ammoniumnitraat	Ammoniumnitrate	6484-52-2	1942	NH4NO3	80.04	-	-	1.72	-	-	-		S			
195	Aniline	Aniline	62-53-3	1547	C6H7N	93.13	184°C	-6.2°C	1.0217 at 20°C	0.3 mm Hg at 20°C	10-50 mg/ml at 23°C	0.90		L			
196	Antimoonkaliumtartraat	Antimony potassium-tartrate	28300-74-5	1551	C4H4KO7Sb	324.93	-	332-335°C	2.6	-	10-50 mg/ml at 21°C	-		S			
197	Antimoontrichloride	Antimony trichloride	10025-91-9	1733	Cl3Sb	228.12	223.5°C	73°C	3.14 at 20°C	-	99.01 g/l at 25°C	-		S			
198	Arseenzuur	Arsenic acid	7778-39-4	1553	AsH3O4	141.94	-	-	-	-	-	-		S			
199	Arseen(tri)oxide	Arsenic trioxide	1327-53-3	1561	As2O3	197.84	465°C	312.3°C	-	-	-	-		S			

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200	Benzaldehyde	Benzaldehyde	100-52-7	1990	C7H6O	106.13	179°C	-26°C	1.05 at 15°C	1 mm Hg at 26°C	3.3 g/l	1.48		L			
201	Cyclohexanon	Cyclohexanone	108-94-1	1915	C6H10O	98.16	155.6°C	-16°C	3.4	4 mm Hg at 20°C	23 g/l at 20°C	0.81		L			
202	Cyclohexylamine	Cyclohexylamine	108-91-8	2357	C6H13N	99.17	134.5°C	-17.7°C	0.85 at 25°C	-	-	-		L			
203	Decahydronaftaleen (Decalin)	Decahydronaphtalene (Decalin)	91-17-8	1147	C10H18	138.25	194°C (cis); 186°C (trans)	-43°C (cis); -31°C (trans)	-	1 mm Hg at 23°C	-	-		L			
204	Diacetonalcohol	Diacetonealcohol	123-42-2	1148	C6H12O2	116.16	166-169°C	-57°C	0.93 at 25°C	1 mm Hg at 20°C	-	-		L			
205	Dichloroethylether	Dichloroethylether	111-44-4	1916	C4H8Cl2O	143.02	178°C	-50°C	1.22 at 20°C	0.71 mm Hg at 20°C	10.2 g/l	1.12		L			
206	Methyleenchloride (Dichloromethaan)	Methylenechloride (Dichloromethane)	75-09-2	1593	CH2Cl2	84.93	39.8°C	-96.7°C	1.3255 at 20°C	349 mm Hg at 20°C	20 g/l at 20°C	-		L			
207	Diethanolamine	Diethanolamine	111-42-2	-	C4H11NO2	105.14	269.1°C	28°C	1.097	<0.01 mm Hg at 20°C	954 g/l	-1.77		S or L			
208	Ethylether	Ethylether	60-29-7	1155	C4H10O	74.12	34.6°C	-116.3°C	0.7134 at 20°C	442 mm Hg at 20°C	69 g/l at 20°C	0.77		L			
209	2,4-Tolueen-diisocyanaat	2,4-Toluene-diisocyanate	584-84-9	2078	C9H6N2O2	174.16	251°C	19.5-21.5°C	1.22 at 25°C	0.01 mm Hg at 20°C	-	-		L			
210	Hydrochinon (p-Hydroxyfenol)	Hydroquinone (p-Hydroxyphenol)	123-31-9	-	C6H6O2	110.11	285°C	170°C	1.332 at 15°C	4 mm Hg at 150°C	70 g/l at 25°C	0.50		S			
211	Cyanide	Cyanide	57-12-5	-	CN	26.02	-	-	-	-	-	-		S			
212	Blauwzuur	Hydrogen cyanide	74-90-8	1051	HCN	27.03	25.6°C	13.3°C	0.70 at 20°C	620 mm Hg at 20°C	-	0.35		L			

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213	Natriumcyanide	Sodiumcyanide	143-33-9	-	NaCN	49.01	1496°C	563.7°C	1.6 at 25°C	36 mm Hg at 1000°C	>100 mg/ml at 20°C	-		S			
214	Lood	Lead	7439-92-1	-	Pb	207,19	1740°C	327,5°C	11,3437 at 16°C	-	Insoluble	-		S	Y		
215	Lood(II)chloride	Leadchloride	7758-95-4	-	PbCl2	278.11	950°C	501°C	5.85	-	-	-		S			
216	1,2,4-Trimethyl-benzeen (Pseudocumeen)	1,2,4-Trimethyl-benzene (Pseudocumene)	95-63-6	-	C9H12	120.19	169-171°C	-43.78°C	0.8761 at 20°C	-	Practically insoluble	-		L			
217	1-Methylnaftaleen	1-Methylnaphtalene	90-12-0	-	C11H10	142.20	240-243°C	-22°C	1.025	-	26-28 mg/l at 25°C	3.84		L			
218	2-Methylnaftaleen	2-Methylnaphtalene	91-57-6	-	C11H10	142.20	241-242°C	34.6°C	-	-	<1 mg/ml at 21°C	-		S			
219	1,3-Dimethylnaftaleen	1,3-Dimethyl-naphtalene	575-41-7	-	C12H12	156.23	263°C	-	0.98	-	-	-		L			
220	2,3,5-Trimethyl-naftaleen	2,3,5-Trimethyl-naphtalene	829-26-5	-	C13H14	170.25	-	-	-	-	-	-		L			
221	Carbendazim	Carbendazim	10605-21-7	-	C9H9N3O2	191,19	-	302-307°C	-	<10E-7 mbar at 20°C	8 mg/l at 24°C at pH 7	-		S	N		N
222	Aldrin	Aldrin	309-00-2	-	C12H8Cl6	364,93	145°C at 2 mm Hg	104-105,5°C	1,7 at 20°C	2,3E-5 mm Hg at 20°C	0,01 mg/l	-		S	Y		
223	Chlordaan	Chlordane	12789-03-6	-	C10H6Cl8	409,8	175°C at 2 mm Hg	-	-	1E-5 mm Hg at 25°C	0,056 mg/l	6		L	Y		
224	Chlordeen	Chlordene	3734-48-3	-	C10H6Cl6	338.86	-	-	-	-	-	-		L	Y		
225	Dieldrin	Dieldrin	60-57-1	-	C12H8Cl6O	381	-	176-177°C	1,62 at 20°C	1,8E-7 mm Hg at 25°C	0,1 mg/l	6,2		S	Y		
226	Endosulfan	Endosulfan	115-29-7	-	C9H6Cl6O3S	406,93	-	70-100°C	-	-	<1 mg/ml	-	Mixed isomers	S	Y		

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227	Endosulfan (alfa)	Endosulfan (alpha)	959-98-8	-	C9H6Cl6O3S	406,93	-	108-110°C	-	-	<1 mg/ml	-		S	Y		
228	Endosulfan (beta)	Endosulfan (beta)	33213-65-9	-	C9H6Cl6O3S	406,93	-	208-210°C	-	-	<1 mg/ml	-		S	Y		
229	Endrin	Endrin	72-20-8	-	C12H8Cl6O	380,9	-	200°C	-	2E-7 mm Hg at 25°C	<1 mg/ml	5,6		S	Y		
230	Kepone (Chlordecone)	Kepone (Chlordecone)	143-50-0	-	C10Cl10O	490,6	-	-	-	<3E-7 mm Hg	7,6 mg/l at 24°C	-		S	Y		Y
231	Mirex	Mirex	2385-85-5	-	C10Cl12	545,55	485°C	485°C	-	-	0,2 mg/l at 24°c	6,9		S	Y		
232	Oxychlordaan	Oxychlordane	27304-13-8	-	C10H4Cl8O	423.74	-	-	-	-	-	-		-	Y		
233	cis-Chlordaan	cis-Chlordane	5103-71-9	-	C10H6Cl8	409,76	-	106-107°C	-	-	-	-		S	Y		
234	trans-Chlordaan	trans-Chlordane	57-74-9	-	C10H6Cl8	409,76	-	104-105°C	-	-	-	-		S	Y		
235	Fotomirex	Photomirex	39801-14-4	-	C10HCl11	511.06	-	-	-	-	-	-		-	Y		
236	Toxafeen	Toxaphene (Camphechlor)	8001-35-2	-	C10H10Cl8	413,8	-	65-90°C	1,65 at 25°C	6,7E-6 mbar at 20°c	3 mg/l at 20°c	5,28		S	Y		Y
237	trans-Nonachlor	trans-Nanochlor	39765-80-5	-	C10H5Cl9	444.2		-	-	-	-	-	Y Major constituent of technical chlordane and technical heptachlor				
238	2,4-Dichloorfenol	2,4-Dichlorophenoxy acetic acid (2,4-D)	94-75-7	-	C8H6Cl2O3	221,04	-	138°C	1,42 at 25°C	<1 mbar at 20°C	890 ppm at 25°C	2,81		S	N		
239	Prochloraz	Prochloraz	67747-09-5	-	C15H16Cl3N3O2	376,67	-	38,5-41°C	-	0,57E-9 torr at 20°C	5,5 mg/l	-		S	N		

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240	DDT	DDT	50-29-3	-	C14H9Cl5	354,49	260°C	108°C	-	1,9E-7 mm Hg at 20°C	3,1-3,4 µg/l	6,19	Technical DDT p,p'-isomer predominant component (up to 30% o,p'-DDT)	S	Y		
241	p,p'-DDT	p,p'-DDT	50-29-3	-	C14H9Cl5	354,49	260°C	108°C	-	1,9E-7 mm Hg	3,1-3,4 µg/l	6,19	Major component of technical DDT (>70%)	S	Y		
242	o,p'-DDT	o,p'-DDT	789-02-6	-	C14H9Cl5	354,49	-	-	-	-	-	-	Minor component of technical DDT (<30%)	S	Y		
243	Dicofol (Kelthaan)	Dicofol (Kelthane)	115-32-2	-	C14H9Cl5O	370,5	225°C	79°C	1,45 at 25°C	-	1,2 mg/l at 24°C	-		L	Y		
244	Iprodione	Iprodione	36734-19-7	-	C13H13Cl2N3O3	330,17	-	136°C	-	<1E-6 mm Hg at 20°C	13 mg/l at 20°C	-		S	N		
245	Vinclozolin	Vinclozolin	50471-44--8	-	C12H9Cl2NO3	286,11	131°C	108°C	-	-	1 g/l at 20°C	-	Demasculinizing effects of vinclozolin exposure *in vivo* may also be mediated via its anti-androgenic metabolites	S	N		
246	Maneb	Maneb	12427-38-2	-	(C4H6MnN2S4)n	265,26	-	-	-	<1E-7 mbar at 20°C	0,5 µg/ml	-		S	N		
247	Thiram	Thiram	137-26-8	-	C6H12N2S4	240,44	-	155-156°C	1,29	<10 mbar at 20°C	30 mg/l at 20°C	1,82		S	N		
248	Zineb	Zineb	12122-67-7	-	C4H6N2S4Zn	275,73	-	-	-	<1E-7 mbar at 20°C	10 mg/l at 25°C	-		S	N		
249	Ziram	Ziram	137-30-4	-	C6H12N2S4Zn	305,81	-	250°C	1,7	-	65 mg/l at 25°C	-		S	N		

Chem ID	Chemical Name Dutch	Chemical Name English	CAS	UN	Chemical Formula	Mol weight	Boiling Point	Melting Point	Density	Pressure	Solubility	Log Kow	Notes	Ph	P	D	A
250	Lindaan (gamma-Hexachloorcyclo-hexaan)	Lindane (gamma-Hexachlorocyclo-hexane)	58-89-9	-	C6H6Cl6	290,83	323,4°C	112-113°C	1,87 at 20°C	9,4E-6 mm Hg at 20°C	17 mg/l at 24°C	3,7		S	Y		
251	Diuron	Diuron	330-54-1	-	C9H10Cl2N2O	233,1	-	158-159°C	-	3,1E-6 mbar at 50°C	42 mg/l at 25°C	2,75		S	N		
252	Linuron	Linuron	330-55-2	-	C9H10Cl2N2O2	249,11	-	93-94°C	-	1,5E-5 mm Hg at 24°C	75 mg/l	3,18		-	N		
253	Diazinon	Diazinon	33-41-5	-	C12H12N2O3PS	304,4	-	-	1,12	1,8E-4 mbar at 20°C	40 mg/l at 25°C	3,14		L	N		
254	Dimethoaat	Dimethoate	60-51-5	-	C5H12NO3PS2	229,27	-	48-52°C	1,28 at 65°C	0,025 mm Hg at 25°C	25 g/l at 25°C	2,71		S	N		
255	Fenthion	Fenthion	55-38-9	-	C10H16O3PS2	278,34	87°C at 0,01 mm Hg	-	1,25 at 20°C	3E-5 mm Hg at 20°C	55 mg/l at 25°C	-		L	N		
256	Malathion	Malathion	121-75-5	-	C10H19O6PS2	330,36	156-157°C at 0,7 mm Hg	2,85°C	1,2076 at 20°C	4E-5 mm Hg at 20°C	145 mg/l at 20°C	2,89		L	N		
257	Methyl parathion	Methyl parathion	298-00-0	-	C8H10NO5PS	263,22	-	37-38°C	1,36 at 20°C	-	55-60 mg/l	2,04		S	N		
258	Parathion (-ethyl)	Parathion (-ethyl)	56-38-2	-	C10H14NO5PS	291,3	375°C	6°C	1,27 at 18,5°C	3,78 E-5 mm Hg at 20°C	24 mg/l	3,81		L	N		
259	Amitrole (Aminotriazole)	Amitrole (Aminotriazole)	61-82-5	-	C4H4N4	84,04	-	159°C	1,138 at 20°C	2,3E-4 hPa at 60°C	280 g/l at 25°C	-		S	N		
260	Atrazine	Atrazine	1912-24-9	-	C8H14ClN5	215,7	-	173-175°C	1,187 at 20°C	3E-7 mm Hg at 20°C	70 mg/l at 25°C	2,64		S	Y		N
261	Simazine	Simazine	122-34-9	-	C7H12ClN5	201,7	-	225-227°C	1,302 at 20°C	8,1E-7 Pa at 20°C	5 mg/l at 20°C	1,95		S	N		

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262	Triadimefon	Triadimefon	43121-43-3	-	C14H16ClN3O2	293,75	-	82°C	-	-	260 mg/l at 20°C	-		S	N		
263	Acetochlor	Acetochlor	34256-82-1	-	C14H20ClNO2	269,77	134°C at 0,4 torr	-	-	-	400 mg/l at 25°C	-		L	N		
264	Alachlor	Alachlor	15972-60-8	-	C14H20ClNo2	269,77	100°C at 0,02 mm Hg	40°C	1,13 at 20°C	-	148 mg/l at 20°C	2,64		S	N		
265	1,2-Dibromoethaan (ethyleendibromide; EDB)	1,2-Dibromoethane (ethylenedibromide; EDB)	106-93-4	-	C2H4Br2	187,88	131,6°C	9,97°C	2,177 at 21°C	11 mm Hg at 20°C	4,31 mg/l at 30°C	-		L	N		N
266	Heptachlor	Heptachlor	76-44-8	-	C10H5Cl7	373,34	135-145°C	95-96°C	1,66 at 20°C	3E-4 mm Hg at 25°C	-	5,44		S	Y		
267	Heptachlorepoxide	Heptachlorepoxide	1024-57-3	-	C10H5Cl7O	389,3	-	157-160°C	-	-	200 µg/l at 25°C	5,4		L	Y		
268	Bromoethaan (Methylbromide)	Bromoethane (Methylbromide)	74-83-9	-	CH3Br	94,95	3,56°C	-93°C	1,732 at 0°C	40 mm Hg at -54,2°C	900 mg/l at 20°C	-		L or G	N		
269	Nitrofen	Nitrofen	1836-75-5	-	C12H7Cl2NO3	284,1	180-190°C at 0,25 mm Hg	70-71°C	-	8E-6 mm Hg at 40°C	0,7-1,2 mg/l at 22°C	-		S	Y		
270	Paraquat	Paraquat	4685-14-7	-	(C12H14N2)2+	186,28	-	-	-	-	very soluble	-		S	N		
271	Propanil	Propanil	709-98-8	-	C9H9Cl2NO	218,08	-	91-93°C	1,25 at 25°C	9E-5 mm Hg at 60°C	225 mg/l at 25°C	-		S	N		
272	Octachlorostyreen	Octachlorostyrene	29082-74-4	-	C8Cl8	379,71	-	-	-	-	25 µg/l	6,2		-	Y		
273	Styreen	Styrene	100-42-5	-	C8H8	104,16	145,2°C	-30,6°C	0,909 at 20°C	5 mm Hg at 20°C	300 mg/l at 20°C	-		L	N		
274	2,4-Dichlorofenol	2,4-Dichlorophenol	120-83-2	-	C6H4Cl2O	163,01	210°C	45°C	-	-	4,5 mg/l at 25°C	-		S	N		

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275	Hexachlorobenzeen	Hexachlorobenzene	118-74-1	-	C6Cl6	284,76	322°C	229°C	2,04 at 23°C	1,09E-5 mm Hg at 20 °C	6 µg/l	-	Potent inducer of hepatic microsomal enzymes	S	Y		Y
276	4-tert-Butylfenol (p-tert-Butylfenol)	4-tert-Butylphenol (p-tert-Butylphenol)	98-54-4	-	C10H14O	150,22	239,5°C	101°C	-	-	700 mg/l	3,31		S	N		
277	4-tert-Octylfenol (p-tert-Octylfenol)	4-tert-Octylphenol (p-tert-Octylphenol)	140-66-9	-	C14H22O	206,33	150-175°C at 13 hPa	-	-	11 hPa at 150°C	-	-		S	Y		
278	Nonylfenol	Nonylphenol	25154-52-3	-	C15H24O	220,39	315°C	-	0,95	-	Practically insoluble	4.5		L	N		Y
279	Butylbenzylftalaat (BBP)	Butylbenzylphtalate (BBP)	85-68-7	-	C19H20O4	312,4	370°C	<-35°C	1,1 at 25°C	8,6E-6 mm Hg at 20°C	-	4,91		L	N		
280	Di-2-ethylhexylftalaat (DEHP)	Di-2-ethylhexylphtalate (DEHP)	117-81-7	-	C24H38O4	390,56	385°C	-55°C	0,9732 at 24°C	1,2 mm Hg at 200°C	0,04 mg/l	9,64	Di-n-octylphtalate (DOP)	L	N		N
281	Dicyclohexylftalaat (DCHP)	Dicyclohexylphtalate	84-61-7	-	C20H26O4	330,43	200-235°C at 4 mm Hg	62-65°C	1,2	-	Insoluble	-		S	N		
282	Diethylftalaat (DEP)	Diethylphtalate (DEP)	84-66-2	-	C12H12O4	222,24	298°C	-3°C	1,117	-	<1 mg/l at 19°C	-		L	N		
283	Diisodecylftalaat (DiDcP)	Diisodecylphtalate (DiDcP)	26761-40-0	-	C28H46O4	446,67	250-257°C at 4 mm Hg	-50°C	0,97 at 20°C	-	Insoluble	-		L	N		
284	Diisononylftalaat (DINP)	Diisononylphtalate (DINP)	28553-12-0	-	C26H42O4	418,6	-	-	-	-	<1 mg/l at 21°C	-		L	N		
285	Di-n-butylftalaat (DBP)	Di-n-butylphtalate (DBP)	84-74-2	-	C16H22O4	278,35	340°C	-35°C	1,05 at 25°C	0,1 mm Hg at 115°C	400 mg/l at 25°C	4,57		L	N		
286	Epichlorohydrine	Epichlorohydrin	109-89-8	-	C3H5ClO	92,53	117,9°C	-48°C	1,183 at 18,5°C	12 mm Hg at 20°C	60 g/l at 20°C	0,45		L	N		

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287	Difenyl	Diphenyl	92-52-4	-	C12H10	154,21	254°C	70°C	1,041	-	7,5 mg/l at 25°C	3,16		S	N		
288	2-Hydroxybifenyl	2-Hydroxybiphenyl	90-43-7	-	C12H10O	170,21	275°C	56°C	-	-	700 mg/l at 25°C	-	S N o-Phenylphenol; 2-Biphenylol				
289	PCB	PCB	1336-36-3	-	C12HxCly	291,99	-	-	-	-	-	-		L	Y		
290	PCB 128 (2,2',3,3',4,4'-Hexachlorobifenyl)	PCB 128 (2,2',3,3',4,4'-Hexachlorobiphenyl)	38380-07-3	-	C12H4Cl6	360,86	-	-	-	-	-	-		L	Y		
291	PCB 136 (2,2',3,3',6,6'-Hexachlorobifenyl)	PCB 136 (2,2',3,3',6,6'-Hexachlorobiphenyl)	38411-22-2	-	C12H4Cl6	360,86	-	-	-	-	-	-		L	Y		
292	PCB 153 (2,2',4,4',5,5'-Hexachlorobifenyl)	PCB 153 (2,2',4,4',5,5'-Hexachlorobiphenyl)	35065-27-1	-	C12H4Cl6	360,86	-	-	-	-	0,95 µg/l at 24°C	6,72		L	Y		
293	PCB 156 (2,3,3',4,4',5-Hexachlorobifenyl)	PCB 156 (2,3,3',4,4',5-Hexachlorobiphenyl)	38380-08-4	-	C12H4Cl6	360,86	-	-	-	-	-	-		L	Y		
294	PCB 169 (3,3',4,4',5,5'-Hexachlorobifenyl)	PCB 169 (3,3',4,4',5,5'-Hexachlorobiphenyl)	32774-16-6	-	C12H4Cl6	360,86	-	-	-	-	-	-		L	Y		
295	PCB 47 (2,2',4,4'-Tetrachlorobifenyl)	PCB 47 (2,2',4,4'-Tetrachlorobiphenyl)	2437-79-8	-	C12H6Cl4	291,99	-	-	-	-	-	-		L	Y		
296	PCB 48 (2,2',4,5-Tetrachlorobifenyl)	PCB 48 (2,2',4,5-Tetrachlorobiphenyl)	70362-47-9	-	C12H6Cl4	291,99	-	-	-	-	-	-		L	Y		
297	PCB 52 (2,2',5,5'-Tetrachlorobifenyl)	PCB 52 (2,2',5,5'-Tetrachlorobiphenyl)	35693-99-3	-	C12H6Cl4	291,99	-	-	-	-	-	-		L	Y		
298	PCB 61 (2,3,4,5-Tetrachlorobifenyl)	PCB 61 (2,3,4,5-Tetrachlorobiphenyl)	33284-53-6	-	C12H6Cl4	291,99	-	-	-	-	-	-		L	Y		
299	PCB 75 (2,4,4',6-Tetrachlorobifenyl)	PCB 75 (2,4,4',6-Tetrachlorobiphenyl)	32598-12-2	-	C12H6Cl4	291,99	-	-	-	-	-	-		L	Y		
300	PCB 77 (3,3',4,4'-Tetrachlorobifenyl)	PCB 77 (3,3',4,4'-Tetrachlorobiphenyl)	32598-13-3	-	C12H6Cl4	291,99		-	-	-	-	-		L	Y		

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301	Aroclor 1242 (PCB 1242)	Aroclor 1242 (PCB 1242)	53469-21-9	-	-	-	325-366°C	-	-	50 mm Hg at 225°C	0,1 mg/l at 24°C	-		L	Y		
302	Aroclor 1248 (PCB 1248)	Aroclor 1248 (PCB 1248)	12672-29-6	-	-	-	340-375°C	-	-	-	-	-		L	Y		
303	Aroclor 1254 (PCB 1254)	Aroclor 1254 (PCB 1254)	11097-69-1	-	C12H5Cl5	326	365-390°C	10°C	1,47-149 at 90°C	-	< 1 mg/l at 21°C	-		L	Y		
304	Aroclor 1260 (PCB 1260)	Aroclor 1260 (PCB 1260)	11096-82-5	-	-	-	385-420°C	-	-	-	0,08 mg/l at 24°C	-		L	Y		
305	2,2',4,4'-Tetrabroom-difenylether	2,2',4,4'-Tetrabromo-diphenylether	-	-	-	-	-	-	-	-	-	-		L	Y		
306	Decabroomdifenylether	Decabrominated diphenylether	No. CAS 044	-	-	-	-	-	-	-	-	-		L	Y		
307	Octabroomdifenylether	Octabrominated diphenylether	No. CAS 043	-	-	-	-	-	-	-	-	-		L	Y		
308	Firemaster BP-6 (Polybroombifenyl; PBB)	Firemaster BP-6 (Polybrominated biphenyl; PBB)	59536-65-1	-	-	-	-	-	-	-	insoluble	-	S Y Hexabromobiphenyl (Technical grade)				
309	2,4,5,2',4',5'-Hexa-broombifenyl	2,4,5,2',4',5'-Hexa-bromobiphenyl	67774-32-7	-	-	-	-	119-121°C	-	-	< 1 mg/l at 18°C	-	S Y Firemaster FF-1 (Polybrominated biphenyl; PBB)				
310	2,2',4,4',5-Penta-broomdifenyl ether (BDE 99)	2,2',4,4',5-Penta-bromodiphenyl ether (BDE 99)	-	-	-	-	-	-	-	-	-	-		L	Y		
311	2-Naphtol (beta-Naphtol)	2-Naphtol (beta-Naphtol)	135-19-3	-	C10H8O	144,16	295°C	122°C	1,1 at 4°C	5 mm Hg at 145°C	740 mg/l at 25°C	2,84		S	N		
312	1,2,3,7,8-Pentachloro-dibenzo-p-dioxine	1,2,3,7,8-Pentachloro-dibenzo-p-dioxin	40321-76-4	-	C12H3Cl5O2	356,4	-	-	-	-	-	-		S	Y		

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313	2,3,7,8-Tetrachloro-dibenzo-p-dioxine (2,3,7,8-TCDD)	2,3,7,8-Tetrachloro-dibenzo-p-dioxin (2,3,7,8-TCDD)	1746-01-6	-	C12H4Cl4O2	321,96	-	295°C	-	-	<1 mg/l at 25°C	-		S	Y		
314	1,2,3,7,8-Pentabroom-dibenzofuran	1,2,3,7,8-Pentabromo-dibenzofuran	107555-93-1	-	C12H3Br5O	217,21	-	-	-	-	-	-		S	Y		
315	1,2,3,7,8-Pentachloor-dibenzofuran	1,2,3,7,8-Pentachloro-dibenzofuran	57117-41-6	-	C12H3Cl5O	340,42	-	-	-	-	-	-		S	Y		
316	1,2,3,7,9-Pentachloor-dibenzofuran	1,3,7,9-Pentachloro-dibenzofuran	83704-53-4	-	C12H3Cl5O	340,42	-	-	-	-	-	-		S	Y		
317	1,2,7,8-Tetrachloor-dibenzofuran	1,2,7,8-Tetrachloro-dibenzofuran	58802-20-3	-	C12H4Cl4O	305,98	-	-	-	-	-	-		S	Y		
318	1,3,6,8-Tetrachloor-dibenzofuran (1,3,6,8-TCDD)	1,3,6,8-Tetrachloro-dibenzofuran (1,3,6,8-TCDD)	71998-72-6	-	C12H4Cl4O	305,98	-	-	-	-	-	-		S	Y		
319	2,3,4,7,8-Pentachloor-dibenzofuran	2,3,4,7,8-Pentachloro-dibenzofuran	57117-31-4	-	C12H3Cl5O	340,5	-	195-196°C	-	-	-	-		S	Y		
320	2,3,7,8-Tetrabroom-dibenzofuran	2,3,7,8-Tetrabromo-dibenzofuran	67733-57-7	-	C12H4Br4O	483,8	-	-	-	-	-	-		S	Y		
321	2,3,7,8-Tetrachloor-dibenzofuran	2,3,7,8-Tetrachloro-dibenzofuran	51207-31-9	-	C12H4Cl4O	305,98	-	-	-	-	-	-		S	Y		
322	Aluminium	Aluminum	7429-90-5	-	Al	26,98	2470°C	660°C	2,7	-	insoluble	-		S	Y		
323	Cadmium	Cadmium	7440-43-9	-	Cd	112,41	765°C	320,9°C	-	-	insoluble	-		S	Y		
324	Koper(II)sulfaat	Copper(II)sulfate	7758-98-7	-	O4S.Cu	159,6	-	-	-	-	-	-		S			
325	Kwik	Mercury	7439-97-6	-	Hg	200,59	357°C	-38,8°C	-	0,0012 mm	insoluble	-		L	Y		
326	Methylkwik	Methylmercutry	22967-92-6	-	CH3Hg	215,63	-	-	-	-	-	-		-			
327	Tributyltin (Tributylstannaan)	Tributyltin (Tributylstannane)	688-73-3	-	C12H28Sn	291,01	-	-	-	-	-	-		-	Y		Y

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328	Tributyltinoxide	Tributyltinoxide	56-35-9	-	C24H54OSn2	596,16	173°C at 130 Pa	<-45°C	1,17-1,18 at 20°C	1E-3 Pa at 20°C	-	-		L	Y		Y
329	Tributyltinbenzoaat	Tributyltinbenzoate	4342-36-3	-	C19H32O2Sn	411,2	135°C at 30 Pa	20°C	1,2	2E-4 Pa at 20°C	-	-		-	Y		Y
330	Tributyltinchloride	Tributyltinchloride	1461-22-9	-	C12H27ClSn	325,53	140°C at 1300 Pa	-16°C	1,2	-	Practically insoluble	3.74		L	Y		Y
331	Tributyltinfluoride	Tributyltinfluoride	1983-10-4	-	C12H27FSn	309,08	-	-16°C	1,25	-	-	-		-	Y		Y
332	Tributyltinlinoleaat	Tributyltinlinoleate	24124-25-2	-	C30H58O2Sn	569,5	140°C at 50 Pa	<0°C	1,05	9E-2 Pa at 20°C	-	-		-	Y		Y
333	Tributyltinmethacrylaat	Tributyltinmethacrylate	2155-70-6	-	C16H32O2Sn	375,14	-	16°C	1,14	3E-2 Pa at 20°C	-	-		-	Y		Y
334	Tributyltinnafthenaat	Tributyltinnaphthenate	85409-17-2	-	-	-	125°C at 50 Pa	<0°C	1,1	9E-5 Pa at 20°C	-	-		-	Y		Y
335	Tripropyltinchloride	Tripropyltinchloride	2279-76-7	-	C9H21ClSn	283,44	-	-	-	-	-	-		-	Y		Y
336	Tetrabutyltin	Tetrabutyltin	1461-25-2	-	C16H36Sn	347,21	-	-	-	-	-	-		-	Y		Y
337	Trifenyltin	Triphenyltin	892-20-6	-	C18H16Sn	351,03	-	-	-	-	-	-		-	Y		Y
338	Trifenyltinhydroxide	Triphenyltinhydroxide	76-87-9	-	C18H16OSn	367,03	-	118-120°C	1,54 at 20°C	-	<1 mg/l at 21°C	-		S	Y		Y
339	Fentinacetaat (Trifenyltinacetaat)	Fentinacetate (Triphenyltinacetate)	900-95-8	-	C20H18O2Sn	409,07	-	-	-	-	-	-		-	Y		Y
340	3,4-Dichlooraniline	3,4-Dichloroaniline	95-76-1	-	C6H5Cl2N	162,02	272°C	72°C	1,36 at 20°C	0,02 hPa at 20°C	580 mg/l at 20°C	2,7		S	N		
341	4-Nitrotolueen (p-Nitrotolueen)	4-Nitrotoluene (p-Nitrotoluene)	99-99-0	-	C7H7N2	137,15	238,3°C	54,5°C	1,286 at 20°C	0,1 mm Hg at 20°C	442 mg/l at 30°C	2,37		S	N		
342	Tetrachloorethyleen (Perchloorethyleen)	Tetrachloroethylene (Perchloroethylene)	127-18-4	-	C2Cl4	1665,83	121°C	-19°C	1,623 at 20°C	14 mm Hg at 20°C	150 mg/l at 25°C	2,6		L	N		

Chem ID	Chemical Name Dutch	Chemical Name English	CAS	UN	Chemical Formula	Mol weight	Boiling Point	Melting Point	Density	Pressure	Solubility	Log Kow	Notes	Ph	P	D	A
343	Resorcinol	Resorcinol	108-46-3	-	C6H6O2	110,11	277-280°C	109-111°C	1,285 at 15°C	27E-5 hPa at 25°C	1,29 kg/l at 30°C	0,77		S	N		
344	Vinylacetaat	Vinylacetate	108-05-4	-	C4H6O2	86,09	73°C	-93,2°C	0,932	83 mm Hg at 20°C	23 g/l at 20°C	0,73		L	N		
345	Metribuzin	Metribuzin	21097-64-9	-	C8H14N4OS	214,28	-	125-126,5°C	-	-	1,2 g/l at 20°C	-		S	N		
346	Anthraceen	Anthracene	120-12-7	-	C14H10	178,24	339,9°C	217°C	1,25	1,96E-4 mm Hg at 20°C	1,29 mg/l at 25°C	4,45		S	Y		
347	Benz(a)anthraceen	Benz(a)anthracene	56-55-3	-	C18H12	228,28	435°C	157-159°C	-	-	<1 mg/ml at 20°C	-		S	Y		
348	Benzo(b)fluorantheen	Benzo(b)fluoranthene	205-99-2	-	C20H12	252,32	-	163-165°C	-	5E-7 mm Hg at 20°C	1,2 µg/l	6,57		S	Y		
349	Benzo(k)fluorantheen	Benzo(k)fluoranthene	207-08-9	-	C20H12	252,32	480°C	217°C	-	5E-7 mm Hg at 20°C	0,55 µg/	6,84		S	Y		
350	Benzo(a)pyreen	Benzo(a)pyrene	50-32-8	-	C20H12	252,32	312°C	179°C	-	5E-7 mm Hg at 20°C	3 µg/l	6,04		S	Y		
351	Chryseen	Chrysene	218-01-9	-	C18H12	228,3	448°C	254°C	1,274	6,3E-7 mm Hg at 20°C	6 µg/l at 25°C	5,61		S	Y		
352	Dibenzo(a,h)-anthraceen	Dibenzo(a,h)-anthracene	53-70-3	-	C22H14	278,35	524°C	266-267°C	-	1E-10 mm Hg at 20°C	0,5 µg/l	5,97		S	Y		
353	Chlorpyrifos	Chlorpyrifos	2921-88-2	-	C9H11Cl3N3PS	350,59	-	41,5-43,5°C	1,4 at 43,5°C	1,87E-5 mm Hg at 20°C	0,4 mg/l at 23°C	5,11		S	N		
354	2,2-bis(p-hydroxyphenyl)-1,1,1-trichloorethaan	2,2-bis(p-hydroxyphenyl)-1,1,1-trichloroethane	2971-36-0	-	-	-	-	-	-	-	-	-	- N HPTE: metabolite of methoxychlor				
355	Methoxychlor	Methoxychlor	72-43-5	-	C16H15Cl3O2	345,66	-	86-88°C	1,41 at 25°C	1E-3 Pa at 22°C	0,04 mg/l at 24°C	4,30		S	N		Y

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356	Pentachloorfenol (PCP)	Pentachlorophenol (PCP)	87-86-5	-	C6Cl5OH	266,34	309-310°C	191°C	1,98	0,00011 mm Hg at 20°C	14 mg/l at 20°C	4,07		S	Y		
357	beta-Hexachloor-cyclohexaan	beta-Hexachloro-cyclohexane	319-85-7	-	C6H6Cl6	290,85	-	312°C	-	-	Insoluble	-		S	Y		
358	p,p'-DDE	p,p'-DDE	72-55-9	-	C14H8Cl4	318,03	316,5°C	88-90°C	-	-	0,04 mg/l at 20°C	4,28		S	Y		
359	p,p'-DDD	p,p'-DDD	72-54-8	-	C14H10Cl4	320,04	193°C	109-112°C	1,476 at 20°C	-	0,16 mg/l at 24°C	-		S	Y		
360	1,2-Dibroom-3-chloorpropaan (DBCP)	1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	-	C3H5Br2Cl	236,35	196°C	6°C	2,05 at 20°C	0,8 mm Hg at 21°C	1 g/l at 25°C	-		L	N		N
361	Trifluralin	Trifluralin	1582-09-8	-	C13H16F3N3O4	335,32	139-140°C at 4,2 mm Hg	46-47°C	1,294 at 25°C	1,99E-4 mm Hg at 29°C	4 mg/l at 27°C	-		S	Y		
362	Zink	Zinc	7440-66-6	-	Zn	65,38	908°C	419,5°C	7,14 at 25°C	1,3 mbar at478°C	-	-		S	Y		
363	Metiram	Metiram	9006-42-2	-	C16H33N11S16Zn3	1088,65	-	-	-	<7,5E-6 mbar at 20°C	2,1 mg/l at 20°C	-		S	N		
364	Mancozeb	Mancozeb	8018-01-7	-	C4H6MnN2S4. C4H6N2S4Zn	541,03	-	-	-	-	Insoluble	-		S	N		
365	Methomyl	Methomyl	16752-77-5	-	C5H10N2O2S	162,2	-	78-79°C	-	-	-	-		S	N		
366	Carbofuran	Carbofuran	1563-66-2	-	C12H15N3	221,26	-	150-152°C	-	2E-5 mm Hg at 33°C	250-700 mg/l at 25°C	-		S	N		
367	Carbaryl	Carbaryl	63-25-2	-	C12H11N2	201,24	-	142°C	-	<0,005 mm Hg at 26°C	40 mg/l at 30°C	-		S	N		
368	Aldicarb	Aldicarb	116-06-3	-	C7H14N2O2S	190,27	-	98-100°C	-	3,47E-5 mm Hg	6 g/l at 25°C	-		S	N		

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369	2,2'-bis(4-(2,3-epoxypropoxy)-fenyl)propaan	2,2'-bis(4-(2,3-epoxypropoxy)-phenyl)propane	1675-54-3	-	C21H24O4	340,45	-	-	-	-	-	-	- May be conversed to bisphenol A		N		
370	Benomyl	Benomyl	17804-35-2	-	C14H18N4O3	290,36	-	-	-	-	2 mg/l at 25°C	-		S	N		
371	Tergitol NP9 (NP9EO)	Tergitol NP9 (NP9EO)	127087-87-0	-	-	-	-	-	-	-	-	-		L			
372	4-Nonylfenoxy-carboxylzuur (NP1EC)	4-Nonylphenoxycarbo-xylic acid (NP1EC)	-	-	-	-	-	-	-	-	-	-		-			
373	4-Nonylfenol-diethoxylaat (NP2EO)	4-Nonylphenol-diethoxylate (NP2EO)	20427-84-3	-	C19H32O3	308,46	-	-	-	-	-	-		-	N		
374	ZearaleNn	ZearaleNne	17924-92-4	-	C18H22O5	318,4	-	164-165°C	-	-	<0,1 mg/ml at 18°C	-	Phyto estrogen	S			
375	beta-Sitosterol	beta-Sitosterol	83-46-5	-	C29H50O	414,72	-	140°C	-	-	-	-	Phyto estrogen	S			
376	Genistein	Genistein	446-72-0	-	C15H10O5	270,24	-	297-298°C	-	-	Practically insoluble	-	Phyto estrogen	S			
377	Coumestrol	Coumestrol	479-13-0	-	C15H8O5	268,23	-	385°C	-	-	Practically insoluble	-	Phyto estrogen	S			
378	Estrone (Oestrone)	Estrone (Oestrone)	53-16-7	-	C18H22O2	270,37	-	254,5-256°C	-	-	Practically insoluble	-		S			
379	Estriol (Oestriol)	Estriol (Oestriol)	50-27-1	-	C18H24O3	288,42	-	282°C	1,27	-	Practically insoluble	-		S			
380	17-beta-estradiol (17-beta-oestradiol)	17-beta-estradiol (17-beta-oestradiol)	50-28-2	-	C18H24O2	272,42	-	173-179°C	-	-	Almost insoluble	4		S			N
381	17-alfa-estradiol (17-alfa-oestradiol)	17-alpha-estradiol (17-alpha-oestradiol)	57-91-0	-	C18H24O2	272,42	-	220-223°C	-	-	Insoluble	-		S			
382	17-alfa-ethinylestradiol	17-alpha-ethinylestradiol	57-63-6	-	C20H24O2	296,44	-	142-146°C	-	-	Practically insoluble	-		S	Y		

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383	Diethylstilbestrol (DES)	Diethylstilbestrol (DES)	56-53-1	-	C18H20O2	268,36	-	169-172°C	-	-	<1 mg/l at 20°C	-		S			
384	p-Chloor-o-cresol (4-Chloor-2-methylfenol)	p-Chloro-o-cresol (4-Chloro-2-methylphenol)	1570-64-5	-	C7H7ClO	142,59	222-225°C	48-51°C	-	-	<1mg/ml at 15°C	-	S N 4-Chloro-2-methylphenol				
385	p-Chloor-m-cresol (4-Chloor-3-methylfenol)	p-Chloro-m-cresol (4-Chloro-3-methylphenol)	59-50-7	-	C7H7ClO	142,59	235°C	66°C	-	-	<1 mg/ml at 20°C	3,1	S N 4-Chloro-3-methylphenol				
386	Fenoxycarb	Fenoxycarb	72490-01-8	-	C17H19N4	301,34	-	53-54°C	-	-	5,76 mg/l at 23°C	-		S	N		
387	2,4,5-Trichloorfenoxy azijnzuur (2,4,5-T)	2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	93-76-5	-	C8H5Cl3O3	255,49	-	158°C	1,803 at 20°C	-	278 mg/l at 25°C	3,4		S	N		
388	Hexachloorcyclo hexaan (HCH mixed)	Hexachlorocyclo hexane (HCH mixed)	608-73-1	-	C6H6Cl6	290,82	-	-	-	-	-	-		S	Y		
389	Dichlorvos	Dichlorvos	62-73-7	-	C4H7Cl2O4P	220,98	120°C at 19 mbar	-	1,44	6E-3 mbar at 10°C	10 g/l at 25°C	-		L	N		
390	Cypermethrin	Cypermethrin	52315-07-8	-	C22H19Cl2N3	416,3	170-195°C	60-80°C	1,249 at 20°C	5,1E-8 mbar at 70°C	41 µg/l at 25°C	4,47	N S when pure; L when impure				
391	Diisobutylftalaat (DIBP)	Diisobutylphtalate (DIBP)	84-69-5	-	C16H22O4	278,38	295-298°C	-64°C	1,04 at 20°C	-	6,2 mg/l at 24°C	-		L			
392	Clophen A30	Clophen A30	54991-93-4	-	-	-	-	-	-	-	-	-		L			
393	Clophen A50	Clophen A50	8068-44-8	-	-	-	-	-	-	-	-	-		L			
394	Aroclor 1016	Aroclor 1016	12674-11-2	-	-	-	-	-	-	-	0,049 mg/l at 24°C	-		L			
395	Aroclor 1221	Aroclor 1221	11104-28-2	-	-	-	-	-	-	-	0,59 mg/l at 24°C	-		L	N		
396	Aroclor 1232	Aroclor 1232	11141-16-5	-	-	-	-	-	-	-	-	-		L	N		

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397	Mestranol	Mestranol	72-33-3	-	C21H26O2	310,47	-	150-151°C	-	-	Practically insoluble	-		S	N		
398	Methyl-tert-butyl ether (MTBE)	Methyl-tert-butyl ether (MTBE)	1634-04-4	-	C5H12O	88,17	55,2°C	-109°C	0,7404 at 20°C	245 mm Hg at 25°C	48 g/l	-		L			
399	1,4-dichloorbenzeen (p-dichloorbenzeen)	1,4-dichlorobenzene (p-dichlorobenzene)	106-46-7	-	C6H4Cl2	147	174°C	53°C	1.46 at 20°C	0.6 mm Hg at 20°C	79 mg/l at 25°C	3.39 at 20°C		S			
400	Dichlorophenyl carbamoyloxy methyl butenoic acid	Dichlorophenyl carbamoyloxy methyl butenoic acid	-	-	-	-	-	-	-	-	-	-	- Metabolite of vinclozolin; full name: 2-(((3,5-dichlorophenyl)-carbamoyl)oxy)-2-methyl-3-butenoic acid				
401	3',5'-dichloro-2-hydroxy-2-methylbut-3-enanilide	3',5'-dichloro-2-hydroxy-2-methylbut-3-enanilide	-	-	-	-	-	-	-	-	-	-	- Metabolite of vinclozolin				
402	Monitor	Monitor	10265-92-6	-	C2H8N2PS	141.14	-	-	-	-	-	-	- Phosphoramidothioic acid, O,S-demethyl ester (organophosphorus insecticide)				
403	Karate	Karate	-	-	-	-	-	-	-	-	-	-	- Pyrethroid insecticide				
404	Talstar	Talstar	-	-	-	-	-	-	-	-	-	-	- Pyrethroid insecticide				
405	Chlorfenvinphos (Birlane)	Chlorfenvinphos (Birlane)	470-90-6	-	C12H14Cl3O4P	359.57	168-170°C at 0.5 mm Hg	-16°C	-	7.5E-6 mm Hg at 23°C	145 mg/l at 23°C	-		L			

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406	Mevinphos (Phosdrin)	Mevinphos (Phosdrin)	7786-34-7	-	C7H13O6P	224.17	99-103°C at 0.03 mm Hg	21°C (cis); 6.9 °C (trans)	1.23 at 20°C	0.0038 mbar at 20°C	Readily soluble	-		L			
407	Tetrachlorvinphos (Gardona)	Tetrachlorvinphos (Gardona)	961-11-5	-	C10H9Cl4O4P	365.96	-	95-97°C	-	-	< 1 mg/ml at 23°C	-		S			
408	Propylthiouracil	Propylthiouracil	51-52-5	-	C7H10N2OS	170.23	-	218-220°C	-	-	< 1 mg/ml at 20°C	-		S			
409	Kaliumperchloraat	Potassium perchlorate	7778-74-7	-	ClKO4	138.55	-	-	2.52	-	-	-		S			
410	2-tert-Butylfenol (o-tert-Butylfenol)	2-tert-Butylphenol (o-tert-Butylphenol)	88-18-6	-	C10H14O	150.24	-	-	-	-	-	-		-			
411	3-tert-Butylfenol (m-tert-Butylfenol)	3-tert-Butylphenol (m-tert-Butylphenol)	-	-	C10H14O	150.24	-	-	-	-	-	-		-			
412	Tergitol NP40	Tergitol NP40	9016-45-9	-	(C2H4O)x.C15H24O	-	-	-	-	-	-	-		-			
413	Tamoxifen	Tamoxifen	10540-29-1	-	C26H29N	371.52	-	96-98°c	-	-	Practically insoluble	-		S			
414	Testosteron	Testosterone	58-22-0	-	C19H24O3	300.40	-	218-219°C	-	-	Practically insoluble	-		S	N		N
415	o,p'-DDE	o,p'-DDE	3424-82-6	-	C14H8Cl4	318.02	-	-	-	-	-	-		S	Y		Y
416	Methoxychlor, o-demethylated	Methoxychlor, o-demethylated	-	-	-	-	-	-	-	-	-	-	-	N 1,1,1-trichloro-2-(4-hydroxyphenyl)-2-(4-methoxyphenyl)ethane			
417	16-alfa-Bromoestradiol	16-alpha-Bromoestradiol	-	-	C18H23BrO2	351.3	-	215-216°C	-	-	Practically insoluble	-	S 1,3,5(10)-Estratrien-16-alpha-bromo-3,17-beta-diol				

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418	5-Androstenediol	5-Androstenediol	-	-	C19H30O2	290.4	-	179-181°C	-	-	Practically insoluble	-	5-Androsten-3-beta,17-beta-diol	S			
419	17-Epiestriol	17-Epiestriol	-	-	C18H24O3	288.4	-	244-245°C	-	-	Practically insoluble	-	1,3,5(10)-Estratrien-3,16-alpha,17-alpha-triol	S			
420	16-keto-17-beta-Estradiol	16-keto-17-beta-Estradiol	-	-	C18H22O3	286.4	-	238-240°C	-	-	Practically insoluble	-	1,3,5(10)-Estratrien-3,17-beta-diol-16-one	S			
421	Progesteron	Progesterone	57-83-0	-	C21H30O2	314.47	-	128-130°C	-	-	Practically insoluble	-	4-Pregnen-3,20-dione	S			
422	2-Hydroxyestrone	2-Hydroxyestrone	-	-	C18H22O3	286.4	-	191-193°C	-	-	Practically insoluble	-	1,3,5(10)-Estratrien-2,3-diol-17-one	S			
423	4-Hydroxytamoxifen	4-Hydroxytamoxifen	68047-06-3	-	C26H29N2	387.5	-	-	-	-	Practically insoluble	-		S			
424	Raloxifen	Raloxifene	-	-	-	-	-	-	-	-	-	-		-			
425	Octylfenol	Octylphenol	27193-28-8	-	C14H22O	206.36	-	-	-	-	-	-		-			
426	4,4'-Bifenol (p,p'-Bifenol)	4,4'-Biphenol (p,p'-Biphenol)	92-88-6	-	C12H10O2	186.22	-	-	-	-	-	-	- Hydroxylated PCB metabolite				
427	OH-PCB-A	OH-PCB-A	-	-	-	-	-	-	-	-	-	-	- 2,2',3',4',5'-pentachloro-4-biphenylol				

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428	OH-PCB-B	OH-PCB-B	-	-	-	-	-	-	-	-	-	-	- 2,2',3',4',6'-pentachloro-4-biphenylol				
429	OH-PCB-C	OH-PCB-C	-	-	-	-	-	-	-	-	-	-	- 2,2',3',5',6'-pentachloro-4-biphenylol				
430	OH-PCB-D	OH-PCB-D	-	-	-	-	-	-	-	-	-	-	- 2,2',4',6'-pentachloro-4-biphenylol				
431	OH-PCB-E	OH-PCB-E	-	-	-	-	-	-	-	-	-	-	- 2',3,3',4',5'-pentachloro-4-biphenylol				
432	OH-PCB-F	OH-PCB-F	-	-	-	-	-	-	-	-	-	-	- 2',3,3',4',6'-pentachloro-4-biphenylol				
433	OH-PCB-G	OH-PCB-G	-	-	-	-	-	-	-	-	-	-	- 2',3,3',5',6'-pentachloro-4-biphenylol				
434	OH-PCB-H	OH-PCB-H	-	-	-	-	-	-	-	-	-	-	- 2',3,4',6'-tetrachloro-4-biphenylol				
436	OH-PCB-L	OH-PCB-L	-	-	-	-	-	-	-	-	-	-	- 2',3',4',5'-tetrachloro-4-biphenylol				

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437	OH-PCB1	OH-PCB1	-	-	-	-	-	-	-	-	-	-	- 2,3,3',4',5-pentachloro-4-biphenylol-				
438	OH-PCB2	OH-PCB2	-	-	-	-	-	-	-	-	-	-	- 2,2',3,4',5,5'-hexachloro-4-biphenylol				
439	OH-PCB3	OH-PCB3	-	-	-	-	-	-	-	-	-	-	- 2,2',3',4,4',5,5'-heptachloro-3-biphenylol				
440	OH-PCB4	OH-PCB4	-	-	-	-	-	-	-	-	-	-	- 2',3,3',4',5-pentachloro-4-biphenylol				
441	OH-PCB5	OH-PCB5	-	-	-	-	-	-	-	-	-	-	- 2,2',3,3',4',5-hexachloro-4-biphenylol				
442	OH-PCB6	OH-PCB6	-	-	-	-	-	-	-	-	-	-	- 2,2',3,3',4',5,5'-heptachloro-4-biphenylol				
443	OH-PCB7	OH-PCB7	-	-	-	-	-	-	-	-	-	-	- 2,2',3,4',5,5',6-heptachloro-4-biphenylol				
444	Daidzeine	Daidzein	486-66-8	-	C15H10O4	254.24	-	-	-	-	Practically insoluble	-	Phyto estrogen	S			
445	Apigenine	Apigenin	520-36-5	-	C15H10O5	270.24	-	345-350°C	-	-	Practically insoluble	-	Phyto estrogen	S			
446	Kaempferol	Kaempferol	520-18-3	-	C15H10O6	286.24	-	276-278°C	-	-	Slightly soluble	-	Phyto estrogen	S			

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447	Quercetine	Quercetin	117-39-5	-	C15H10O7	302.24	-	-	-	-	Practically insoluble	-	Phyto estrogen	S			
448	Naringenine	Naringenin	480-41-1	-	C15H12O5	272.26	-	251	-	-	Practically insoluble	-	Phyto estrogen	S			
449	Phloretine	Phloretin	60-82-2	-	C15H14O5	274.27	-	-	-	-	Practically insoluble	-	Phyto estrogen	S			
450	Formononetine	Formononetin	485-72-3	-	C16H12O4	268.27	-	258°C	-	-	Slightly soluble	-	Phyto estrogen	S			
451	Biochanine A	Biochanin A	491-80-5	-	C16H12O5	284.27	-	-	-	-	-	-	S Phytoestrogen; Apigenin 4'-methyl ether				
452	Ipriflavone	Ipriflavone	35212-22-7	-	C18H16O3	280.32	-	115-117°C	-	-	-	-	Phyto estrogen	S			
453	Chrysine	Chrysin	480-40-0	-	C15H10O4	254.24	-	285°C	-	-	Practically insoluble	-	Phyto estrogen	S			
454	Flavone	Flavone	525-82-6	-	C15H10O2	222.24	-	99-100°C	-	-	Practically insoluble	-	Phyto estrogen	S			
455	2,4-Dichloorfenoxy-acetaat, dimethylamine zout	2,4-Dichlorophenoxy-acetic acid, dimethylamine salt	2008-39-1	-	C10H11Cl2N3	264.12	-	85-87°C	-	-	-	-		S			
456	2,4-Dichloorfenoxy-acetaat, isooctyl ester	2,4-Dichlorophenoxy-acetic acid, isooctyl ester	25168-26-7	-	C16H22Cl2O3	333.28	317°C	-	1.15	-	10 mg/l	-		L			
457	Glyfosaat	Glyphosate	1071-83-6	-	C3H8N5P	169.09	-	200°C	1.74	-	10 g/l at 25°C	-		S			
458	Roundup	Roundup	38641-94-0	-	C3H9N.C3H8N5P	228.22	-	-	-	-	-	-	- Glyphosate isopropylamine salt				

Chem ID	Chemical Name Dutch	Chemical Name English	CAS	UN	Chemical Formula	Mol weight	Boiling Point	Melting Point	Density	Pressure	Solubility	Log Kow	Notes	Ph	P	D	A
459	Activate Plus	Activate Plus	-	-	-	-	-	-	-	-	-	-	- Adjuvant for pesticides				
460	Nalcotrol	Nalcotrol	-	-	-	-	-	-	-	-	-	-	- Adjuvant for pesticides				
461	Preference	Preference	-	-	-	-	-	-	-	-	-	-	- Adjuvant for pesticides				
462	X-77	X-77	-	-	-	-	-	-	-	-	-	-	- Adjuvant for pesticides				
463	Herbimax	Herbimax	-	-	-	-	-	-	-	-	-	-	- Adjuvant for pesticides				
464	Niet gespecifieerde milieuvervuiling	Non-specified environmental contamination	-	-	-	-	-	-	-	-	-	-		-			
465	o,p'-DDD	o,p'-DDD	53-19-0	-	C14H10Cl4	320.04	-	76-78°C	-	-	Practically insoluble	-		S	Y		Y
466	PCB 190 (2,3,3',4,4',5,6-Heptachloorbifenyl)	PCB 190 (2,3,3',4,4',5,6-Heptachlorobiphenyl)	41411-64-7	-	C12H3Cl7	395.32	-	-	-	-	-	7.5		-			Y
467	PCB 60 (2,3,4,4'-Tetrachloorbifenyl)	PCB 60 (2,3,4,4'-Tetrachlorobiphenyl)	33025-41-1	-	C12H6Cl4	291.99	-	-	-	-	-	6.1		-			Y
468	PCB 104 (2,2',4,6,6'-Pentachloorbifenyl)	PCB 104 (2,2',4,6,6'-Pentachlorobiphenyl)	-	-	-	-	-	-	-	-	-	5.8		-			N
469	PCB 184 (2,2',3,4,4',6,6'-Heptachloorbifenyl)	PCB 184 (2,2',3,4,4',6,6'-Heptachlorobiphenyl)	74472-48-3	-	C12H3Cl7	395.32	-	-	-	-	-	6.8		-			N
470	PCB 126 (3,3',4,4',5-Pentachloorbifenyl)	PCB 126 (3,3',4,4',5-Pentachlorobiphenyl)	-	-	-	-	-	-	-	-	-	6.9		-			Y

Chem ID	Chemical Name Dutch	Chemical Name English	CAS	UN	Chemical Formula	Mol weight	Boiling Point	Melting Point	Density	Pressure	Solubility	Log Kow	Notes	Ph	P	D	A
471	PCB 112 (2,3,3',5,6-Pentachloorbifenyl)	PCB 112 (2,3,3',5,6-Pentachlorobiphenyl)	74472-36-9	-	C12H5Cl5	326.44	-	-	-	-	-	6.4		-			Y
472	PCB 173 (2,2',3,3',4,5,6-Heptachloorbifenyl)	PCB 173 (2,2',3,3',4,5,6-Heptachlorobiphenyl)	68194-16-1	-	C12H3Cl7	395.32	-	-	-	-	-	7		-			Y
473	PCB 143 (2,2',3,4,5,6'-Hexachloorbifenyl)	PCB 143 (2,2',3,4,5,6'-Hexachlorobiphenyl)	-	-	-	-	-	-	-	-	-	6.6		-			N
474	OH-PCB30	OH-PCB30	-	-	-	-	-	-	-	-	-	5	- 2',4',6'-Trichloro-4-biphenylol				
475	OH-PCB61	OH-PCB61	-	-	-	-	-	-	-	-	-	5.5	- 2',3',4',5'-Tetrachloro-3-biphenylol				
476	Benzo(ghi)peryleen	Benzo(ghi)perylene	191-24-2	-	C22H12	276	> 500°C	222°C	-	1E-10 mm Hg at 20°C	0.26 µg/l at 25°C	7.23		-			
477	Fluoreen	Fluorene	86-37-7	-	C13H10	166.21	295°C	116-117°C	-	0.013 mm Hg at 20°C	1.98 mg/l at 25°C	4.18		S			
478	Pyreen	Pyrene	129-00-0	-	C16H10	202.26	404°C	156°C	1.271 at 23°C	6.85E-7 mm Hg at 20°C	0.16 mg/l at 26°C	5.32		S			
479	Tributyltinacetaat	Tributyltinacetate	56-36-0	-	C14H30O2Sn	349.13	-	-	-	-	-	-		-	Y		Y
480	Ethyleen thiourea (ETU)	Ethylene thiourea (ETU)	96-45-7	-	C3H6N2S	102.16	-	199-204°C	-	-	1-5 mg/ml at 18°C	-0.66		S			N
481	alfa-Naftoflavone	alpha-Naphtoflavone	604-59-1	-	C19H12O2	272.3	-	-	-	-	-	-	Phyto estrogen	S			
482	7,8-Dihydroxyflavone	7,8-Dihydroxyflavone	38183-03-8	-	C15H10O4	254.2	-	-	-	-	-	-	Phyto estrogen	S			
483	Galangin	Galangin	548-83-4	-	C15H10O5	270.24	-	214-215°C	-	-	Insoluble	-	Phyto estrogen	S			

Chem ID	Chemical Name Dutch	Chemical Name English	CAS	UN	Chemical Formula	Mol weight	Boiling Point	Melting Point	Density	Pressure	Solubility	Log Kow	Notes	Ph	P	D	A
484	Baicalein	Baicalein	491-67-8	-	C15H10O5	270.24	-	-	-	-	Practically insoluble	-	Phyto estrogen	S			
485	Cyanazine	Cyanazine	21725-46-2	-	C9H13ClN6	240.7	-	167.5-169°C	-	2E-7 Pa at 20°C	170 mg/l at 20°C	1.8-2.25		S	N		
486	OH-PCB 104	OH-PCB 104	-	-	-	-	-	-	-	-	-	-	- 2,4,6,2',6'-Pentachloro-4-biphenylol				
487	PCB 155	PCB 155	-	-	-	-	-	-	-	-	-	-	- 2,4,6,2',4',6'-Hexachlorobiphenyl				
488	delta-Hexachloorcyclo-hexaan (delta-HCH)	delta-Hexachlorocyclo-hexane (delta-HCH)	319-86-8	-	C6H6Cl6	290.82	-	-	-	-	-	-		-			
489	Ditridecylftalaat (DTDP)	Ditridecylphtalate (DTDP)	119-06-2	-	C34H58O4	530.84	-	-	0.95 g/ml at 20°C	-	Insoluble	-		L			
490	Di-n-hexylftalaat (DHP)	Di-n-hexylphtalate (DHP)	84-75-3	-	C20H30O4	334.5	350°C at 735 mm Hg	-58°C	-	-	Insoluble	-		L			
491	Difenylftalaat (DPhP)	Diphenylphtalate (DPhP)	84-62-8	-	C20H14O4	318.34	-	-	-	-	-	-		-			
492	Butylcyclohexylftalaat (BCHP)	Butylcyclohexylphtalate (BCHP)	84-64-0	-	C18H24O4	304.39	-	-	-	-	< 1 mg/ml at 20°C	-		L			
493	Isohexylbenzylftalaat (IHBP)	Isohexylbenzylphtalate (IHBP)	-	-	-	-	-	-	-	-	-	-		-			
494	Diisohexylftalaat (DIHP)	Diisohexylphtalate (DIHP)	-	-	-	-	-	-	-	-	-	-		-			
495	Dimethylftalaat (DMP)	Dimethylphtalate (DMP)	131-11-3	-	C10H10O2	194.18	283.7°C at 760 mm Hg	0°C	-	-	< 1 mg/ml	-		L			

Chem ID	Chemical Name Dutch	Chemical Name English	CAS	UN	Chemical Formula	Mol weight	Boiling Point	Melting Point	Density	Pressure	Solubility	Log Kow	Notes	Ph	P	D	A
496	Diundecylftalaat (DUP)	Diundecylphtalate (DUP)	3648-20-2	-	C30H50O4	474.72	-	-	-	-	Insoluble	-		L			
497	cis-Nonachlor	cis-Nonachlor	5103-73-1	-	C10H5Cl9	444.22	-	-	-	-	-	-		-			
498	2,2',5,5'-Tetrachloor-4-bifenylol	2,2',5,5'-Tetrachloro-4-biphenylol	-	-	-	-	-	-	-	-	-	-		-			
499	2,4,6-Trichloor-4'-bifenylol	2,4,6-Trichloro-4'-biphenylol	-	-	-	-	-	-	-	-	-	-	- Hydroxylated PCB metabolite				
500	2,3,4,5-Tetrachloor-4'-bifenylol	2,3,4,5-Tetrachloro-4'-biphenylol	-	-	-	-	-	-	-	-	-	-	- Hydroxylated PCB metabolite				
501	2-Chloor-4,4'-bifenyldiol	2-Chloro-4,4'-biphenyldiol	-	-	-	-	-	-	-	-	-	-	- Hydroxylated PCB metabolite				
502	2-Chloor-4-bifenylol	2-Chloro-4-biphenylol	-	-	-	-	-	-	-	-	-	-	- Hydroxylated PCB metabolite				
503	4'-Chloor-4-bifenylol	4'-Chloro-4-biphenylol	-	-	-	-	-	-	-	-	-	-	- Hydroxylated PCB metabolite				
504	2,6-Dichloor-4'-bifenylol	2,6-Dichloro-4'-biphenylol	-	-	-	-	-	-	-	-	-	-	- Hydroxylated PCB metabolite				
505	2,5-Dichloor-4'-bifenylol	2,5-Dichloro-4'-biphenylol	-	-	-	-	-	-	-	-	-	-	- Hydroxylated PCB metabolite				

Chem ID	Chemical Name Dutch	Chemical Name English	CAS	UN	Chemical Formula	Mol weight	Boiling Point	Melting Point	Density	Pressure	Solubility	Log Kow	Notes	Ph	P	D	A
506	3,4',5-Trichloor-4-bifenylol	3,4',5-Trichloro-4-biphenylol	-	-	-	-	-	-	-	-	-	-	- Hydroxylated PCB metabolite				
507	2,3,5,6-Tetrachloor-4,4'-bifenyldiol	2,3,5,6-Tetrachloro-4,4'-biphenyldiol	-	-	-	-	-	-	-	-	-	-	- Hydroxylated PCB metabolite				
508	4-Bifenylol (4-Fenylfenol)	4-Biphenylol (4-Phenylphenol)	92-69-3	-	C12H10O	170.21	321°C	165-167°C	-	-	-	-	S Hydroxylated PCB metabolite				
509	3,3',5,5'-Tetrachloor-4,4'-bifenyldiol	3,3',5,5'-Tetrachloro-4,4'-biphenyldiol	-	-	-	-	-	-	-	-	-	-	- Hydroxylated PCB metabolite				
510	Bis(2-ethylhexyl)-adipaat (DEHA)	Bis(2-ethylhexyl)-adipate (DEHA)	103-23-1	-	C22H42O4	370.57	417°C	-67.8°C	0.928	5 mm Hg at 214 °C	< 0.1 mg/ml at 22°C	-		L			
511	Benzophenone	Benzophenone	119-61-9	-	C13H10O	182.21	305°C	49-51°C	-	1 mm Hg at 108.2°C	< 1 mg/ml at 25°C	-		S			
512	n-Butylbenzeen	n-Butylbenzene	104-51-8	-	C10H14	134.21	183°C	-81°C	0.86 at 20°C	1 mm Hg at 23°C	-	-		L			
513	Butylhydroxyanisole	Butylhydroxyanisole	25013-16-5	-	C11H16O2	180.27	264-270 °C at 733 mm Hg	48-55°C	-	-	< 1 mg/ml at 18.5°C	-		S			
514	2',5'-Dichloor-3-bifenylol	2',5'-Dichloro-3-biphenylol	-	-	-	-	-	-	-	-	-	-	- Hydroxylated PCB metabolite				
515	2,2',4-Trichloordifenyl -ether	2,2',4-Trichlorodi-phenyl ether	-	-	-	-	-	-	-	-	-	-	- PCB metabolite				

Chem ID	Chemical Name Dutch	Chemical Name English	CAS	UN	Chemical Formula	Mol weight	Boiling Point	Melting Point	Density	Pressure	Solubility	Log Kow	Notes	Ph	P	D	A
516	2,2',5'-Trichloor-4-bifenylol	2,2',5'-Trichloro-4-biphenylol	-	-	-	-	-	-	-	-	-	-	- Hydroxylated PCB metabolite				
517	2,3,4'-Trichloorbifenyl	2,3,4'-Trichlorobiphenyl	38444-85-8	-	C12H7Cl3	257.55	-	-	-	-	-	-		-			
518	2',3',5-Trichloorbifenyl	2',3',5-Trichloro-biphenyl	-	-	-	-	-	-	-	-	-	-		-			
519	2,4,4',5-Tetrachloor-difenylether	2,4,4',5-Tetrachloro-diphenyl ether	61328-45-8	-	C12H6Cl4O	307.98	-	-	-	-	-	-	- PCB metabolite				
521	2,4,4'',6-Tetrachloor-p-terfenyl	2,4,4'',6-Tetrachloro-p-terphenyl	-	-	-	-	-	-	-	-	-	-	- PCB metabolite				
522	2',3',4',5,5'-Pentachloor-2-bifenylol	2',3',4',5,5'-Pentachloro-2-biphenylol	-	-	-	-	-	-	-	-	-	-	- Hydroxylated PCB metabolite				
523	alpha-Zearalanol (Zeranol)	alpha-Zearalanol (Zeraol)	26538-44-3	-	C18H26O5	322.44	-	178-180°C	-	-	< 1 mg/ml at 20°C	-	Phyto estrogen	S			
524	Koper	Copper	7440-50-8	-	Cu	63.546	2595°C	1083°C	8.94	-	-	-		S	Y		
525	Kobalt	Cobalt	7440-48-4	-	Co	58.93	2870°C	1495°C	8.92	-	< 1 mg/ml at 19°C	-		S	Y		
526	Nikkel	Nickel	7440-02-0	-	Ni	58.6934	2732°C	1453°C	8.908	-	-	-		S	Y		
527	Mangaan	Manganese	7439-96-5	-	Mn	54.938	2095°C	1244°C	7.21 at 20°C	-	-	-		S	Y		
528	Bisfenol A dimethacrylaat	Bisphenol A dimethacrylate	3253-39-2	-	-	-	-	-	-	-	-	-	Diphenyl alkane	-			
529	4-Octylfenol (p-Octylfenol)	4-Octylphenol (p-Octylphenol)	1806-26-4	-	C14H22O	206.33	-	-	-	-	-	-		-			

Chem ID	Chemical Name Dutch	Chemical Name English	CAS	UN	Chemical Formula	Mol weight	Boiling Point	Melting Point	Density	Pressure	Solubility	Log Kow	Notes	Ph	P	D	A
530	4-Nonylfenol dodecyl-ethoxylaat (4-NP12EO)	4-Nonylphenoldodecyl-ethoxylate (4-NP12EO)	-	-	-	-	-	-	-	-	-	-		-			
531	Chlormequat chloride	Chlormequat chloride	999-81-5	-	C5H13Cl2N	158.07	-	-	-	-	Soluble	-		S			
532	ICI 182.780 (Faslodex)	ICI 182.780 (Faslodex)	129453-61-8	-	-	-	-	-	-	-	-	-		-			
533	Estradiol benzoaat	Estradiol benzoate	50-50-0	-	C25H28O3	376.5	-	198-199°C	-	-	-	-		S			
534	Diclofop methyl (Illoxan)	Diclofop methyl (Illoxan)	51338-27-3	-	C16H14Cl2O4	341.19	-	39-41°C	-	-	3 mg/l	-		S			
535	Fenmedifam (Betanal)	Phenmedipham (Betanal)	13684-63-4	-	C16H16N2O4	300.34	-	143-144°C	0.25-0.3 at 20°C	-	< 1 mg/ml at 21°C	-		S			
536	Gesaprine	Gesaprine	-	-	-	-	-	-	-	-	-	-		-			
537	Tris-4-(Chlorofenyl)-methanol	Tris-4-(Chlorophenyl)-methanol	3010-80-8	-	-	-	-	-	-	-	-	-		-			
538	4-MeSO2-CB 149	4-MeSO2-CB 149	-	-	-	-	-	-	-	-	-	-	- 4-Methylsulphonyl-2,5,6,2',4',5'-hexachloro biphenyl (PCB metabolite)				
539	4-MeSO2-CB 91	4-MeSO2-CB 91	-	-	-	-	-	-	-	-	-	-	- 4-Methylsulphonyl-2,5,6,2',4'-pentachloro biphenyl (PCB metabolite)				
540	4-MeSO2-CB 132	4-MeSO2-CB 132	-	-	-	-	-	-	-	-	-	-	- 4-Methylsulphonyl-2,3,6,2',3',4'-hexachloro biphenyl (PCB metabolite)				

Chem ID	Chemical Name Dutch	Chemical Name English	CAS	UN	Chemical Formula	Mol weight	Boiling Point	Melting Point	Density	Pressure	Solubility	Log Kow	Notes	Ph	P	D	A
541	4-MeSO2-CB 174	4-MeSO2-CB 174	-	-	-	-	-	-	-	-	-	-	- 4-Methylsulphonyl-2,3,6,2',3',4',5'-heptachloro biphenyl (PCB metabolite)				
542	3-MeSO2-CB 174	3-MeSO2-CB 174	-	-	-	-	-	-	-	-	-	-	- 3-Methylsulphonyl-2,5,6,2',3',4',5'-heptachloro biphenyl (PCB metabolite)				
543	3-MeSO2-CB 91	3-MeSO2-CB 91	-	-	-	-	-	-	-	-	-	-	- 3-Methylsulphonyl-2,5,6,2',4'-pentachloro biphenyl (PCB metabolite)				
544	3-MeSO2-CB 132	3-MeSO2-CB 132	-	-	-	-	-	-	-	-	-	-	- 3-Methylsulphonyl-2,5,6,2',3',4'-hexachloro biphenyl (PCB metabolite)				
545	3-MeSO2-CB 149	3-MeSO2-CB 149	-	-	-	-	-	-	-	-	-	-	- 3-Methylsulphonyl-2,5,6,2',4',5'-hexachloro biphenyl (PCB metabolite)				
546	3-MeSO2-CB 101	3-MeSO2-CB 101	-	-	-	-	-	-	-	-	-	-	- 3-Methylsulphonyl-2,5,2',4',5'-pentachloro biphenyl (PCB metabolite)				
547	3-Methylsulfonyl-DDE (3-MeSO2-DDE)	3-Methylsulphonyl-DDE (3-MeSO2-DDE)	-	-	-	-	-	-	-	-	-	-		-			
548	Mangostin	Mangostin	6147-11-1	-	C24H26O6	410.47	-	181.6-182.6°C	-	-	Practically insoluble	-	Phyto estrogen	S			

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549	Indole-3-carbinol	Indole-3-carbinol	700-06-1	-	C9H9N	147.2	-	-	-	-	-	-		-			
550	Apomorphine	Apomorphine	58-00-4	-	C17H17N2	267.33	-	-	-	-	Slightly soluble	-	S Dopamine-2 receptor agonist				
551	Haloperidol	Haloperidol	52-86-8	-	C21H23ClFN2	375.87	-	148-149.4°C	-	-	14 mg/l	-	S Dopamine-2 receptor antagonist				
552	Reserpine	Reserpine	50-55-5	-	C33H40N2O9	608.69	-	264-265°C	-	-	< 1 mg/ml at 22°C	-	S Dopamine depletor				
553	2-Hydroxyestradiol	2-Hydroxyestradiol	-	-	C18H24O3	288.4	-	188-190°C	-	-	-	-		-			
554	4-Hydroxyestradiol	4-Hydroxyestradiol	-	-	C18H24O3	288.4	-	237°C	-	-	-	-		S			
555	Moxestrol	Moxestrol	34816-55-2	-	C21H26O3	326.44	-	280°C	-	-	-	-		S			
556	Hexestrol	Hexestrol	84-16-2	-	C18H22O2	270.37	-	185-188°C	-	-	Practically insoluble	-		S			
557	Dienestrol	Dienestrol	84-17-3	-	C18H18O2	266.34	-	227-228°C	-	-	Practically insoluble	-		S			
558	Clomifeen	Clomiphene	911-45-5	-	C26H28ClN	405.97	-	-	-	-	-	-		S			
559	Nafoxidine	Nafoxidine	-	-	-	-	-	-	-	-	-	-		-			
560	PCB 118 (2,3',4,4',5-Pentachloorbifenyl)	PCB 118 (2,3',4,4',5-Pentachlorobiphenyl)	31508-00-6	-	C12H5Cl5	326.44	-	-	-	-	-	-		-			
561	PCB 138	PCB 138	-	-	-	-	-	-	-	-	-	-		-			
562	PCB 180	PCB 180	-	-	-	-	-	-	-	-	-	-		-			
563	PCB 183	PCB 183	-	-	-	-	-	-	-	-	-	-		-			
564	PCB 187	PCB 187	-	-	-	-	-	-	-	-	-	-		-			

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565	Imazalil (Enilconazole)	Imazalil (Enilconazole)	35554-44-0	-	C14H14Cl2N2O	297.18	-	-	-	-	Poorly soluble	-		-			
566	Propioconazole	Propioconazole	-	-	-	-	-	-	-	-	-	-		-			
567	Fenarimol	Fenarimol	60168-88-9	-	C17H12Cl2N2O	331.2	-	117-119°C	-	-	13.7 ppm at pH 7	-		S			
568	Triadimenol	Triadimenol	55219-65-3	-	C14H18ClN3O2	295.77	-	112-117°C	-	-	0.12 g/l	-		S			
569	Bromopropylaat	Bromopropylate	18181-80-1	-	C17H16Br2O3	428.12	-	77°C	-	5.1E-8 mm Hg at 20°C	< 5 mg/l at 20°C	-		S			
570	Chlorobenzilaat	Chlorobenzilate	510-15-6	-	C16H14Cl2O3	325.2	156-158 °C at 0.07 mm Hg	35-37°C	1.2816 at 20°C	2.2E-6 mm Hg at 20°C	< 0.1 mg/ml at 22°C	-		L			
571	Procymidone	Procymidone	32809-16-8	-	C13H11Cl2N2	284.14	-	166°C	1.42-1.46 at 25°C	1.8E-4 mbar at 25°C	4.5 mg/ at 25°C	-	S Systemic agricultural fungicide				
572	Propyzamide	Propyzamide	23950-58-5	-	C12H11Cl2N	256.13	-	155-156°C	-	1.1E-4 mbar at 25°C	15 mg/l at 25°C	-		S			
573	Quintozene (Pentachloor nitrobenzeen)	Quintozene (Pentachloro nitrobenzene)	82-68-8	-	C6Cl5N2	295.34	-	146°C	-	-	Practically insoluble	5.4		S			
574	Tetradifon	Tetradifon	116-29-0	-	C12H6Cl4O2S	356.06	-	146.5-147.5°C	-	-	-	-		S			
575	2-Mercaptomethyl-benzimidazoles	2-Mercaptomethyl-benzimidazoles	53988-10-6	-	-	164.23	-	-	-	-	Practically insoluble	-		S			
576	1,2,3,4,7,8-Hexachloordibenzo-p-dioxine	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxine	39227-28-6	-	C12H2Cl6O2	390.84	-	-	-	-	-	-		-			

Chem ID	Chemical Name Dutch	Chemical Name English	CAS	UN	Chemical Formula	Mol weight	Boiling Point	Melting Point	Density	Pressure	Solubility	Log Kow	Notes	Ph	P	D	A
577	Cadmiumchloride	Cadmium chloride	10108-64-2	-	CdCl2	183.32	960°C	568°C	4.047 at 25°C	-	∆ 100 mg/ml at 20°C	-		S			
578	Zinkchloride	Zinc chloride	7646-85-7	-	ZnCl2	136.3	732°C	290°C	2.907 at 25°C	-	4.32 kg/l at 25°C	-		S			
579	Bisfenol F	Bisphenol F	-	-	-	-	-	-	-	-	-	-	Diphenyl alkane	-			
580	Bisfenol A bischloroformaat	Bisphenol A bischloroformate	-	-	-	-	-	-	-	-	-	-	Diphenyl alkane	-			
581	Bisfenol A ethoxylaat diacrylaat	Bisphenol A ethoxylate diacrylate	-	-	-	-	-	-	-	-	-	-	Diphenyl alkane	-			
582	1,1-Bis(4-hydroxy-phenyl)ethaan	1,1-Bis(4-hydroxy-phenyl)ethane	-	-	-	-	-	-	-	-	-	-	Diphenyl alkane	-			
583	1,1-Bis(4-hydroxy-phenyl)propaan	1,1-Bis(4-hydroxy-phenyl)propane	-	-	-	-	-	-	-	-	-	-	Diphenyl alkane	-			
584	2,2-Bis(4-hydroxy-phenyl)butaan	2,2-Bis(4-hydroxy-phenyl)butane	-	-	-	-	-	-	-	-	-	-	Diphenyl alkane	-			
585	3,3-Bis(4-hydroxy-phenyl)pentaan	3,3-Bis(4-hydroxy-phenyl)pentane	-	-	-	-	-	-	-	-	-	-	Diphenyl alkane	-			
586	4,4-Bis(4-hydroxy-phenyl)heptaan	4,4-Bis(4-hydroxy-phenyl)heptane	-	-	-	-	-	-	-	-	-	-	Diphenyl alkane	-			
587	2,2-Bis(4-hydroxy-3-methylphenyl)propaan	2,2-Bis(4-hydroxy-3-methylphenyl)propane	-	-	-	-	-	-	-	-	-	-	Diphenyl alkane	-			
588	2,2-Bis(4-hydroxy-phenyl)perfluoro-propaan	2,2-Bis(4-hydroxy-phenyl)perfluoro-propane	-	-	-	-	-	-	-	-	-	-	- Diphenylalkane; bisphenol AF				
589	Bis(4-hydroxy-phenyl)keton	Bis(4-hydroxy-phenyl)ketone	-	-	-	-	-	-	-	-	-	-	Diphenyl alkane	-			

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590	2,2-Bis(4-hydroxy-phenyl)propanol	2,2-Bis(4-hydroxy-phenyl)propanol	-	-	-	-	-	-	-	-	-	-	Diphenyl alkane	-			
591	Bisfenol A diglycidylether	Bisphenol A diglycidylether	1675-54-3	-	C19H20O4	312.37	Decomposes	8-12°C	1.16 at 20°C	-	< 1 mg/ml at 19.5°C	-	Diphenyl alkane	L			
592	Bisfenol A ethoxylaat	Bisphenol A ethoxylate	-	-	-	-	-	-	-	-	-	-	Diphenyl alkane	-			
593	Bisfenol A propoxylaat	Bisphenol A propoxylate	-	-	-	-	-	-	-	-	-	-	Diphenyl alkane	-			
594	Bisfenol A diglycidylether dimethacrylaat	Bisphenol A diglycidylether dimethacrylate	-	-	-	-	-	-	-	-	-	-	Diphenyl alkane	-			
595	Flutamide	Flutamide	13311-84-7	-	C11H11F3N2O3	276.22	-	111.5-112.5°C	-	-	-	-		S			
596	2',4',6'-Trichloor-3-bifenylol	2',4',6'-Trichloro-3-biphenylol	-	-	-	-	-	-	-	-	-	-	- 3-OH-2',4',6'-trichlorobiphenyl				
597	2',3,4',5,6'-Pentachloor-4-bifenylol	2',3,4',5,6'-Pentachloro-4-biphenylol	-	-	-	-	-	-	-	-	-	-	- 4-OH-2',3,4',5,6'-pentachlorobiphenyl				
598	3,5-Dichloor-4-bifenylol	3,5-Dichloro-4-biphenylol	-	-	-	-	-	-	-	-	-	-	- 4-OH-3,5-dichlorobiphenyl				
599	2,2-Bis(p-chlorofenyl)-ethanol (DDOH)	2,2-Bis(p-chlorophenyl)-ethanol (DDOH)	2642-82-2	-	C14H12Cl2O	267.16	-	-	-	-	-	-		-			
600	Methopreen	Methoprene	40596-69-8	-	C19H34O3	310.53	135-136 °C at 0.06 mm Hg	-	0.9261 at 20°C	2.37E-5 mm Hg at 25°C	1.39 ppm at 25°C	-	L Insecticide (juvenile hormone analog)				
601	Dibroomacetaat	Dibromoacetic acid	631-64-1	-	C2H2Br2O2	217.84	-	-	-	-	-	-		-			

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602	Phtalic acid	Phtalic acid	88-99-3	-	C8H6O4	166.13	-	-	1.59	-	5.4 g/l at 14°C	0.41		S			
604	Calmidazolium	Calmidazolium	-	-	-	-	-	-	-	-	-	-	Calmodulin inhibitor	-			
605	Trifluoperazine	Trifluoperazine	117-89-5	-	C21H24F3N3S	407.5	-	-	-	-	-	-	Calmodulin inhibitor	-			
606	Dihydrotestosterone	Dihydrotestosterone	-	-	C19H30O2	290.4	-	180-181°C	-	-	-	-	Aromatizable androgen	S			
607	Hydroxyflutamide	Hydroxyflutamide	-	-	-	-	-	-	-	-	-	-	Metabolite of flutamide	-			
608	Triallaat	Triallate	2303-17-5	-	C10H16Cl3NS	304.66	117°C at 0.4 mbar	29-30°C	1.04 at 25°C	1.6E-4 mbar at 25°C	4 mg/l at 20°C	-		S			
609	Ketoconazole	Ketoconazole	65277-42-1	-	C26H28Cl2N4O4	531.44	-	146°C	-	-	-	-	Antifungal agent	S			
610	Metyrapone	Metyrapone	54-36-4	-	C14H14N2O	226.28	-	50-51°C	-	-	-	-	S Medical drug (pituitary function)				
611	Phenanthrene	Phenanthrene	85-01-8	-	C14H10	178.24	340°C	100°C	1.179 at 25°C	6.8E-4 mm Hg at 20°C	0.82 mg/l at 21°C	4.46		S			
612	Benzo(e)pyreen	Benzo(e)pyrene	192-97-2	-	C20H12	252.32	492°C	178-179°C	-	-	< 1 mg/ml at 23°C	-		S			
613	Indeno(1,2,3-C,D)-pyreen	Indeno(1,2,3-C,D)-pyrene	193-39-5	-	C22H12	276.34	536°C	160-163°C	-	1E-10 mm Hg at 20°C	0.062 mg/l	7.66		-			

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614	Coroneen	Coronene	191-07-1	-	C24H12	300.36	525°C	> 360°C	-	-	-	-		-			
615	4-MeSO2-CB 64	4-MeSO2-CB 64	-	-	-	-	-	-	-	-	-	-	- 4-Methylsulphonyl-2,3,6,4'-tetrachlorobiphenyl (PCB metabolite)				
616	4-MeSO2-CB 110	4-MeSO2-CB 110	-	-	-	-	-	-	-	-	-	-	- 4-Methylsulphonyl-2,3,6,3',4'-pentachloro-biphenyl (PCB metabolite)				
617	4-MeSO2-CB 87	4-MeSO2-CB 87	-	-	-	-	-	-	-	-	-	-	- 4-Methylsulphonyl-2,5,2',3',4'-pentachloro-biphenyl (PCB metabolite)				
618	4-MeSO2-CB 70	4-MeSO2-CB 70	-	-	-	-	-	-	-	-	-	-	- 4-Methylsulphonyl-2,5,3',4'-tetrachloro-biphenyl (PCB metabolite)				
619	4-MeSO2-CB 49	4-MeSO2-CB 49	-	-	-	-	-	-	-	-	-	-	- 4-Methylsulphonyl-2,5,2',4'-tetrachloro-biphenyl (PCB metabolite)				
620	4-MeSO2-CB 52	4-MeSO2-CB 52	-	-	-	-	-	-	-	-	-	-	- 4-Methylsulphonyl-2,5,2',5'-tetrachloro-biphenyl (PCB metabolite)				

Chem ID	Chemical Name Dutch	Chemical Name English	CAS	UN	Chemical Formula	Mol weight	Boiling Point	Melting Point	Density	Pressure	Solubility	Log Kow	Notes	Ph	P	D	A
621	4-MeSO2-CB 101	4-MeSO2-CB 101	-	-	-	-	-	-	-	-	-	-	- 4-Methylsulphonyl-2,5,2',4',5'-pentachloro-biphenyl (PCB metabolite)				
622	4-MeSO2-CB 141	4-MeSO2-CB 141	-	-	-	-	-	-	-	-	-	-	- 4-Methylsulphonyl-2,5,2',3',4',5'-pentachloro-biphenyl (PCB metabolite)				
623	3-MeSO2-CB 110	3-MeSO2-CB 110	-	-	-	-	-	-	-	-	-	-	- 3-Methylsulphonyl-2,5,6,3',4'-pentachloro-biphenyl (PCB metabolite)				
624	3-MeSO2-CB 64	3-MeSO2-CB 64	-	-	-	-	-	-	-	-	-	-	- 3-Methylsulphonyl-2,5,6,4'-tetrachlorobiphenyl (PCB metabolite)				
625	3-MeSO2-CB 87	3-MeSO2-CB 87	-	-	-	-	-	-	-	-	-	-	- 3-Methylsulphonyl-2,5,2',3',4'-pentachloro-biphenyl (PCB metabolite)				
626	3-MeSO2-CB 70	3-MeSO2-CB 70	-	-	-	-	-	-	-	-	-	-	- 3-Methylsulphonyl-2,5,3',4'-tetrachloro-biphenyl (PCB metabolite)				
627	3-MeSO2-CB 141	3-MeSO2-CB 141	-	-	-	-	-	-	-	-	-	-	- 3-Methylsulphonyl-2,5,2',3',4',5'-hexachloro-biphenyl (PCB metabolite)				

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628	3-MeSO2-CB 49	3-MeSO2-CB 49	-	-	-	-	-	-	-	-	-	-	- 3-Methylsulphonyl-2,5,2',4'-tetrachloro-biphenyl (PCB metabolite)				
629	3-MeSO2-CB 52	3-MeSO2-CB 52	-	-	-	-	-	-	-	-	-	-	- 3-Methylsulphonyl-2,5,2',5'-tetrachloro-biphenyl (PCB metabolite)				
630	Mono(2-ethylhexyl)-ftalaat (MEHP)	Mono(2-ethylhexyl)-phtalate (MEHP)	4376-20-9	-	C10H8ClN	177.63	-	-	-	-	-	-		-			
631	Mono-n-butylftalaat (MBP)	Mono-n-butylphtalate (MBP)	131-70-4	-	C12H14O4	222.26	-	-	-	-	-	-		-			
632	Ftalaat, butyl isobutyl ester	Phtalic acid, butyl isobutyl ester	17851-53-5	-	C16H22O4	278.35	-	-	-	-	-	-		-			
633	Ethyl-iso-butylftalaat	Ethyl-iso-butylphtalate	-	-	-	-	-	-	-	-	-	-		-			
634	Ethyl-n-butylftalaat	Ethyl-n-butylphtalate	-	-	-	-	-	-	-	-	-	-		-			
635	Mono-ethylftalaat	Mono-ethylphtalate	-	-	-	-	-	-	-	-	-	-		-			
636	Mono-iso-butylftalaat	Mono-iso-butylphtalate	-	-	-	-	-	-	-	-	-	-		-			
637	Hesperetin	Hesperetin	520-33-2	-	C16H14O6	302.28	-	226-228°C	-	-	Slightly soluble	-	Phyto estrogen	S			
638	Isorhamnetin	Isorhamnetin	-	-	-	-	-	-	-	-	-	-		-			
639	Luteolin	Luteolin	491-70-3	-	C15H10O6	286.24	-	-	-	-	Sparingly soluble	-	Phyto estrogen	S			
640	Quercetin dihydraat	Quercetin dihydrate	6151-25-3	-	C15H10O7.2H2O	338.27	-	-	-	-	Practically insoluble	-	S Derivative of quercetin				
641	Phenobarbital	Phenobarbital	50-06-6	-	C12H12N2O3	232.24	-	174-178°C	-	-	< 0.1 mg/ml	-		S			

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642	Beta-Naphthoflavone	beta-Naphthoflavone	6051-87-2	-	C19H12O2	272.31	-	-	-	-	-	-		-			
643	Piperonyl butoxide	Piperonyl butoxide	51-03-6	-	C19H30O5	388.45	180°C	-	1.06 at 25°C	-	< 1 mg/ml	-	L Insecticide synergist, especially for pyrethroids and rotenone				
644	Androstenedione	Androstenedione	63-05-8	-	C19H26O2	286.41	-	170-172°C	-	-	-	-	S 4-Androstene-3,17-dione				
645	20-Hydroxyecdysone	20-Hydroxyecdysone	5289-74-7	-	C27H44O7	480.6	-	-	-	-	-	-	S Arthropod moulting hormone				
646	Finasteride	Finasteride	98319-26-7	-	C23H36N2O2	372.55	-	252-254°C	-	-	Very slightly soluble	-	Medical drug	S			
647	PCB 110 (2,3,3',4',6-Pentachloorbifenyl)	PCB 110 (2,3,3',4',6-Pentachlorobiphenyl)	38380-03-9	-	C12H5Cl5	326.44	-	-	-	-	-	-		-			
648	2,2',6,6'-Tetrachloor-bifenyl	2,2',6,6'-Tetrachloro-biphenyl	15968-05-5	-	C12H6Cl4	291.99	-	-	-	-	-	-		-			
649	2,2',6,6'-Tetrachloor-4-bifenylol	2,2',6,6'-Tetrachloro-4-biphenylol	-	-	-	-	-	-	-	-	-	-	PCB meta bolite	-			
650	2,2',3-Trichloorbifenyl	2,2',3-Trichlorobiphenyl	38444-78-9	-	C12H7Cl3	257.55	-	-	-	-	-	-		-			
651	2,2',6-Trichloorbifenyl	2,2',6-Trichlorobiphenyl	38444-73-4	-	C12H7Cl3	257.55	-	-	-	-	-	-		-			
652	2,3',6-Trichloorbifenyl	2,3',6-Trichlorobiphenyl	38444-76-7	-	C12H7Cl3	257.55	-	-	-	-	-	-		-			
654	2,2-Bis(p-chlorophenyl)-acetaat (p,p'-DDA)	2,2-Bis(p-chlorophenyl)-acetic acid (p,p'-DDA)	1878-66-6	-	C8H7ClO2	170.6	-	-	-	-	-	-		-			
655	Endosulfan sulfaat	Endosulfan sulfate	1031-07-8	-	-	-	-	181°C	-	-	-	-		-			

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656	Tetrabroombisfenol A	Tetrabromobisphenol A	79-94-7	-	C15H12Br4O2	543.9	-	180-184°C	-	-	Insoluble	-	S 4,4'-Isopropylidene(2,6-dibromophenol)				
657	4-Hydroxybenzo-phenone	4-Hydroxybenzo-phenone	1137-42-4	-	C13H10O2	198.22	-	-	-	-	-	-		-			
658	3-Hydroxybenzo-phenone	3-Hydroxybenzo-phenone	13020-57-0	-	C13H10O2	198.22	-	-	-	-	-	-		-			
659	2-Hydroxybenzo-phenone	2-Hydroxybenzo-phenone	117-99-7	-	C13H10O2	198.22	-	-	-	-	-	-		-			
660	4-Methylbenzo-phenone	4-Methylbenzo-phenone	134-84-9	-	C14H12O	196.26	-	-	-	-	-	-		-			
661	4-Chlorobenzo-phenone	4-Chlorobenzo-phenone	134-85-0	-	C13H9ClO	216.67	-	-	-	-	-	-		-			
662	4-Nitrobenzophenone	4-Nitrobenzophenone	1144-74-7	-	C13H9N3	227.21	-	-	-	-	-	-		-			
663	4-AmiNbenzophenone	4-AmiNbenzophenone	1137-41-3	-	C13H11N	197.25	-	-	-	-	-	-		-			
664	4-Methoxybenzo-phenone	4-Methoxybenzo-phenone	611-94-9	-	C14H12O2	240.28	-	-	-	-	-	-		-			
665	3-AmiNbenzophenone	3-AmiNbenzophenone	2835-78-1	-	C13H11N	197.25	-	-	-	-	-	-		-			
666	2,2'-Dihydroxybenzo-phenone	2,2'-Dihydroxybenzo-phenone	835-11-0	-	C13H10O3	214.22	-	-	-	-	-	-		-			
667	4,4''-Dihydroxybenzo-phenone	4,4''-Dihydroxybenzo-phenone	611-99-4	-	C13H10O3	214.22	-	-	-	-	-	-		-			
668	4,4'-Chlorobenzo-phenone	4,4'-Chlorobenzo-phenone	90-98-2	-	C13H8Cl2O	251.11	-	-	-	-	-	-		-			
669	4,4'-Diaminobenzo-phenone	4,4'-Diaminobenzo-phenone	611-98-3	-	C13H13N2O	213.27	-	-	-	-	-	-		-			

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670	4-Chloro-4'-hydroxy-benzophenone	4-Chloro-4'-hydroxy-benzophenone	42019-78-3	-	C13H9ClO2	232.67	-	-	-	-	-	-		-			
671	2,3,4-Trihydroxybenzo-phenone	2,3,4-Trihydroxybenzo-phenone	1143-72-2	-	C13H10O4	230.22	-	-	-	-	-	-		-			
672	2,4,4'-Trihydroxybenzo phenone	2,4,4'-Trihydroxybenzo phenone	1470-79-7	-	C13H10O4	230.22	-	-	-	-	-	-		-			
673	2,2',4,4'-Tetrahydroxy-benzophenone	2,2',4,4'-Tetrahydroxy-benzophenone	131-55-5	-	C13H10O5	246.23	-	-	-	-	-	-		-			
674	2',5'-Dichloor-4-bifenylol	2',5'-Dichloro-4-biphenylol	-	-	-	-	-	-	-	-	-	-	PCB meta bolite	-			
675	Coal tar creosote	Coal tar creosote	8001-58-9	-	-	Variable	203°C	Variable	1.06-1.10	-	< 1 mg/ml at 21.5°C	-	L Constituents: liquid and solid aromatic hydrocarbons, tar acids (up to 3%) and tar bases				
676	Ammoniumperchloraat	Ammonium perchlorate	7790-98-9	-	NH4ClO4	117.49	-	-	1.95	-	Freely soluble	-		S	Y		
677	d-trans-Allethrin (Allethrin I)	d-trans-Allethrin (Allethrin I)	584-79-2	-	C19H26O3	302.45	-	-	1.01 at 20°C	-	Practically insoluble	-	Pyre throid insectic.	L			
678	Empenthrin	Empenthrin	-	-	-	-	-	-	-	-	-	-	Pyre throid insectic.	-			
679	Fenvaleraat	Fenvalerate	51630-58-1	-	C25H22ClN3	419.91	-	-	1.17 at 23°C	1.1E-8 mm Hg at 25°C	Insoluble	-	Pyre throid insectic.	L			

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680	Imiprothrin	Imiprothrin	-					-	-	-			Pyre throid insectic.	-			
681	Phenothrin	Phenothrin	26002-80-2	-	C23H26O3	350.49	-	-	1.06 at 25°C	-	Insoluble	-	Pyre throid insectic.	L			
682	Permethrin	Permethrin	52645-53-1	-	C21H20Cl2O3	391.29	-	35°C	1.19-1.272 at 20°C	< 1E-6 mm Hg at 50°C	< 1 ppm	-	Pyre throid insectic.	S or L			
683	Prallethrin	Prallethrin	-	-	-	-	-	-	-	-	-	-		-			
684	Clofibrate	Clofibrate	637-07-0	-	C12H15ClO3	242.7	-	-	-	-	Practically insoluble	-	Hypolipid emic drug	L			
685	3-Hydroxy-benzo(a)pyreen	3-Hydroxy-benzo(a)pyrene	-	-	-	-	-	-	-	-	-	-	Hydroxylated benzo(a)pyrene metabolite				
686	9-Hydroxy-benzo(a)pyreen	9-Hydroxy-benzo(a)pyrene	-	-	-	-	-	-	-	-	-	-	Hydroxylated benzo(a)pyrene metabolite				
687	9,10-Dihydroxy-benzo(a)pyreen	9,10-Dihydroxy-benzo(a)pyrene	-	-	-	-	-	-	-	-	-	-	Hydroxylated benzo(a)pyrene metabolite				
688	7,8-Dihydroxy-benzo(a)pyreen	7,8-Dihydroxy-benzo(a)pyrene	-	-	-	-	-	-	-	-	-	-	Hydroxylated benzo(a)pyrene metabolite				
689	Fadrozole	Fadrozole	102676-47-1	-	C14H13N3	223.28	-	117-118°C	-	-	-	-	Aroma tase inhibitor	S			
690	Testolactone	Testolactone	968-93-4	-	C19H24O3	300.4	-	218-219°C	-	-	-	-	S Aromatase inhibitor; anabolic steroid				
691	Hexabroombenzeen	Hexabromobenzene	87-82-1	-	C6Br6	551.52	-	327°C	-	-	Insoluble	7.3		S			Y

Chem ID	Chemical Name Dutch	Chemical Name English	CAS	UN	Chemical Formula	Mol weight	Boiling Point	Melting Point	Density	Pressure	Solubility	Log Kow	Notes	Ph	P	D	A
692	2,4,6-Tribroomaniline	2,4,6-Tribromoaniline	147-82-0	-	C6H4Br3N	329.82	300°C	120-122°C	2.35	-	Insoluble	-		S			
693	2,4-Dibroomfenol	2,4-Dibromophenol	615-58-7	-	C6H4Br2O	251.92	177°C at 17 mm Hg	40°C	-	-	1.9 g/l at 15°C	2.56		S			Y
694	2,4,6-Tribroomfenol	2,4,6-Tribromophenol	118-79-6	-	C6H3Br3O	330.83	244°C	96°C	2.55 at 20°C	-	70 mg/l	-		S	N		
695	Pentabroomfenol	Pentabromophenol	608-71-9	-	C6HBr5O	488-59	Sublimes	229.5°C	-	-	Insoluble	-		S			
696	2,3,5,6-Tetrabroom-p-xyleen	2,3,5,6-Tetrabromo-p-xylene	23488-38-2	-	C8H6Br4	421.78	-	-	-	-	-	-		-			
697	Pentabroomtolueen	Pentabromotoluene	87-83-2	-	C7H3Br5	486.62	-	288°C	2.97 at 17°C	-	Insoluble	-		S			
698	Monobroombisfenol A	Monobromobisphenol A	-	-	-	-	-	-	-	-	-	-		-			
699	Dibroombisfenol A	Dibromobisphenol A	-	-	-	-	-	-	-	-	-	-		-			
700	Tribroombisfenol A	Tribromobisphenol A	-	-	-	-	-	-	-	-	-	-		-			
702	Bisfenol A diglycidyl ether, brominated	Bisphenol A diglycidyl ether, brominated	-	-	-	-	-	-	-	-	-	-		-			
703	Bisfenol A bis(2,3-dihydroxypropyl)ether	Bisphenol A bis(2,3-dihydroxypropyl)ether	-	-	-	-	-	-	-	-	-	-		-			
704	Bisfenol A bis(3-chloro-2-hydroxypropyl)ether	Bisphenol A bis(3-chloro-2-hydroxypropyl)ether	-	-	-	-	-	-	-	-	-	-		-			
705	Tetrachloorbisfenol A	Tetrachlorobisphenol A	79-95-8	-	C15H12Cl4O2	366.07	-	-	-	-	-	-		-			
706	4-Phenoxyfenol (p-Phenoxyfenol)	4-Phenoxyphenol (p-Phenoxyphenol)	831-82-3	-	C12H10O2	-	-	-	-	-	-	-		-			

Chem ID	Chemical Name Dutch	Chemical Name English	CAS	UN	Chemical Formula	Mol weight	Boiling Point	Melting Point	Density	Pressure	Solubility	Log Kow	Notes	Ph	P	D	A
707	4-(2,4,6-tribroom-phenoxy)fenol	4-(2,4,6-tribromo-phenoxy)phenol	-	-	-	-	-	-	-	-	-	-	Polybrominated diphenyl ether metabolite (T2-HO-BDE)				
708	2-Bromo-4-(2,4,6-tribroomphenoxy)fenol	2-Bromo-4-(2,4,6-tribromophenoxy)phenol	-	-	-	-	-	-	-	-	-	-	Polybrominated diphenyl ether metabolite (T3-HO-BDE)				
709	2,6-Dibromo-4-(2,4,6-tribroomphenoxy)fenol	2,6-Dibromo-4-(2,4,6-tribromophenoxy)-phenol	-	-	-	-	-	-	-	-	-	-	Polybrominated diphenyl ether metabolite (T4-HO-BDE)				
710	2-Hydroxy-2',4,4'-trichloordifenyl ether	2-Hydroxy-2',4,4'-trichlorodiphenyl ether	-	-	-	-	-	-	-	-	-	-	Hydroxylated PCB metabolite				
711	4,4'-Dibroomdifenyl ether (BDE 15)	4,4'-Dibromodiphenyl ether (BDE 15)	-	-	-	-	-	-	-	-	-	-	Polybrominated diphenyl ether metabolite				
712	2,4,4'-Tribroomdifenyl ether (BDE 28)	2,4,4'-Tribromo-diphenyl ether(BDE 28)	-	-	-	-	-	-	-	-	-	-	Polybrominated diphenyl ether metabolite				
713	2,4,6-Tribroomdifenyl ether (BDE 30)	2,4,6-Tribromodiphenyl ether (BDE 30)	-	-	-	-	-	-	-	-	-	-	Polybrominated diphenyl ether metabolite				
714	2,4',6-Tribroomdifenyl ether (BDE 32)	2,4',6-Tribromo-diphenylether (BDE 32)	-	-	-	-	-	-	-	-	-	-	Polybrominated diphenyl ether metabolite				
715	2,2',4,4'-Tetrabroom-difenyl ether (BDE 47)	2,2',4,4'-Tetrabromo-diphenylether (BDE 47)	-	-	-	-	-	-	-	-	-	-	Polybrominated diphenyl ether metabolite				
716	2,2',4,6'-Tetrabroom-difenyl ether (BDE 51)	2,2',4,6'-Tetrabromo-diphenylether (BDE 51)	-	-	-	-	-	-	-	-	-	-	Polybrominated diphenyl ether metabolite				
717	2,3',4',6-Tetrabroom-difenyl ether (BDE 71)	2,3',4',6-Tetrabromo-diphenylether (BDE 71)	-	-	-	-	-	-	-	-	-	-	Polybrominated diphenyl ether metabolite				
718	2,4,4',6-Tetrabroom-difenyl ether (BDE 75)	2,4,4',6-Tetrabromo-diphenylether (BDE 75)	-	-	-	-	-	-	-	-	-	-	Polybrominated diphenyl ether metabolite				
719	3,3',4,4'-Tetrabroom-difenyl ether (BDE 77)	3,3',4,4'-Tetrabromo-diphenylether (BDE 77)	-	-	-	-	-	-	-	-	-	-	Polybrominated diphenyl ether metabolite				

Chem ID	Chemical Name Dutch	Chemical Name English	CAS	UN	Chemical Formula	Mol weight	Boiling Point	Melting Point	Density	Pressure	Solubility	Log Kow	Notes	Ph	P	D	A
720	2,2',3,4,4'-Pentabroom-difenyl ether (BDE 85)	2,2',3,4,4'-Pentabromo-diphenylether (BDE 85)	-	-	-	-	-	-	-	-	-	-	Polybrominated diphenyl ether metabolite				
721	2,2',4,4',6-Pentabroom-difenyl ether (BDE 100)	2,2',4,4',6-Pentabromo-diphenylether (BDE 100)	-	-	-	-	-	-	-	-	-	-	Polybrominated diphenyl ether metabolite				
722	2,3',4,4',6-Pentabroom-difenyl ether (BDE 119)	2,3',4,4',6-Pentabromo-diphenyl ether (BDE 119)	-	-	-	-	-	-	-	-	-	-	Polybrominated diphenyl ether metabolite				
723	2,2',3,4,4',5'-Hexabroomdifenyl ether (BDE 138)	2,2',3,4,4',5'-Hexabromodiphenyl ether (BDE 138)	-	-	-	-	-	-	-	-	-	-	Polybrominated diphenyl ether metabolite				
724	2,2',4,4',5,5'-Hexabroomdifenyl ether (BDE 153)	2,2',4,4',5,5'-Hexabromodiphenyl ether (BDE 153)	-	-	-	-	-	-	-	-	-	-	Polybrominated diphenyl ether metabolite				
725	2,3,4,4',5,6-Hexabroomdifenyl ether (BDE 166)	2,3,4,4',5,6-Hexabromodiphenyl ether (BDE 166)	-	-	-	-	-	-	-	-	-	-	Polybrominated diphenyl ether metabolite				
726	2,3,3',4,4',5,6-Heptabroomdifenyl ether (BDE 190)	2,3,3',4,4',5,6-Pentabromodiphenyl ether (BDE 190)	-	-	-	-	-	-	-	-	-	-	Polybrominated diphenyl ether metabolite				
727	3-Methylcholanthreen	3-Methylcholanthrene	56-49-5	-	C21H16	268.36	280°C at 80 mm Hg	179-180°C	1.28 at 20°C	-	< 0.1 mg/ml at 18°C	-		S			
728	4-Nonylfenoxy acetaat	4-Nonylphenoxy-acetic acid	3115-49-9	-	C17H26O3	278.39	-	-	1.010-1.025 at 20 °C	-	Practically insoluble	-		L			
729	Stigmasterol	Stigmasterol	83-48-7	-	C29H48O	412.7	-	-	-	-	Insoluble	-	Phyto estrogen	S			

Chem ID	Chemical Name Dutch	Chemical Name English	CAS	UN	Chemical Formula	Mol weight	Boiling Point	Melting Point	Density	Pressure	Solubility	Log Kow	Notes	Ph	P	D	A
730	4-tert-Pentylfenol (p-tert-Pentylfenol)	4-tert-Pentylphenol (p-tert-Pentylphenol)	80-46-6	-	C11H16O	164.25	262.5°C at 760 mm Hg	88-96°C	-	-	< 1 mg/ml at 26°C	-	S 4-tert-Amylphenol, p-tert-Amylphenol				
731	Dodecylfenol	Dodecylphenol	27193-86-8	-	C18H30O	262.48	-	-	-	-	-	-		-			
732	4-Heptylfenol	4-Heptylphenol	1987-50-4	-	C13H20O	192.3	-	-	-	-	-	-		-			
733	4-Hexylfenol	4-Hexylphenol	2446-69-7	-	C12H18O	178.27	-	-	-	-	-	-		-			
734	Di-n-Nonylftalaat	Di-n-Nonylphtalate	84-76-4	-	C26H42O4	418.68	-	-	-	-	-	-		-			
735	Diallylftalaat	Diallylphtalate	131-17-9	-	C14H14O4	246.28	-	-	-	-	-	-		-			
736	QO-UB-1	QO-UB-1	-	-	-	-	-	-	-	-	-	-	Synthetic sesquiterpene lactone				
737	QO-UB-5	QO-UB-5	-	-	-	-	-	-	-	-	-	-	Synthetic sesquiterpene lactone				
738	QO-UB-8	QO-UB-8	-	-	-	-	-	-	-	-	-	-	Synthetic sesquiterpene lactone				
739	QO-UB-9	QO-UB-9	-	-	-	-	-	-	-	-	-	-	Synthetic sesquiterpene lactone				
740	QO-UB-10	QO-UB-10	-	-	-	-	-	-	-	-	-	-	Synthetic sesquiterpene lactone				
741	QO-MA-02	QO-MA-02	-	-	-	-	-	-	-	-	-	-	Natural sesquiterpene lactone				
742	QO-CR-1	QO-CR-1	-	-	-	-	-	-	-	-	-	-	Synthetic sesquiterpene lactone				
743	QO-CR-8	QO-CR-8	-	-	-	-	-	-	-	-	-	-	Synthetic sesquiterpene lactone				
744	QO-CR-10	QO-CR-10	-	-	-	-	-	-	-	-	-	-	Synthetic sesquiterpene lactone				

Chem ID	Chemical Name Dutch	Chemical Name English	CAS	UN	Chemical Formula	Mol weight	Boiling Point	Melting Point	Density	Pressure	Solubility	Log Kow	Notes	Ph	P	D	A
745	QO-CR-11	QO-CR-11	-	-	-	-	-	-	-	-	-	-	Synthetic sesquiterpene lactone				
746	Reteen	Retene	483-65-8	-	C18H18	234.32	390-394 at 760 mm Hg	99°C	-	-	< 1 mg/ml at 18°C	-		S			
747	Desethylatrazine	Desethylatrazine	6190-65-4	-	C6H10ClN5	152.15	-	-	-	-	-	1.51	Meta bolite of atrazine	-			
748	Desisopropylatrazine	Desisopropylatrazine	-	-	-	-	-	-	-	-	-	1.15	Meta bolite of atrazine	-			
749	Betulinic acid	Betulinic acid	-	-	-	-	-	-	-	-	-	-	Phyto estrogen	-			
750	Curcumin	Curcumin	458-37-7	-	C21H20O6	368.39	-	183°C	-	-	Insoluble	-	Phyto estrogen	S			
751	Diosmin	Diosmin	520-27-4	-	C28H32O15	608.55	-	-	-	-	Practically insoluble	-	Phyto estrogen	S			
752	Podocarpic acid	Podocarpic acid	5947-49-9	-	C17H22O3	274.36	-	193.5°C	-	-	Practically insoluble	-	Phyto estrogen	S			
753	Sarsasapogenin	Sarsasapogenin	126-19-2	-	C27H44O3	416.64	-	199-199.5°C	-	-	-	-	Phyto estrogen	S			
754	alpha-Zearalenol	alpha-Zearalenol	36455-72-8	-	C18H24O5	320.4	-	-	-	-	-	-	Meta bolite of zearalenone	S			
755	beta-Zearalenol	beta-Zearalenol	71030-11-0	-	C18H24O5	320.4	-	-	-	-	-	-	Meta bolite of zearalenone	S			

Chem ID	Chemical Name Dutch	Chemical Name English	CAS	UN	Chemical Formula	Mol weight	Boiling Point	Melting Point	Density	Pressure	Solubility	Log Kow	Notes	Ph	P	D	A
756	2-Chloor-4-methylfenol	2-Chloro-4-methylphenol	6640-27-3	-	C7H7ClO	142.58	-	-	-	-	-	-	o-Chloro-p-cresol	-			
757	4-Chloorfenol	4-Chlorophenol	106-48-9	-	C6H5ClO	128.56	220°C	43.2-43.7°C	1.26 at 45°C	0.25 mm Hg at 30°C	10-50 mg/ml at 15°C	2.39	p-Chloro phenol	S			
758	2,4,5-trichloorfenol	2,4,5-trichlorophenol	95-95-4	-	C6H3Cl3O	197.46	253°C at 760 mm Hg	68°C	1.5 at 75°C	10 mm Hg at 117.3°C	1.19 g/l at 25°C	3.06		S			
759	Polyvinylchloride	Polyvinyl chloride	9002-86-2	-	(C2H3Cl)n	60,000-150,000	-	-	1.406	-	-	-		S			
760	Fluorantheen	Fluoranthene	206-44-0	-	C16H10	202.26	250°C at 60 mm Hg	110°C	-	6E-6 mm Hg at 20°C	0.265 ppm at 25°C	5.33		S			Y
761	1-Hydroxypyreen	1-Hydroxypyrene	5315-79-7	-	C16H10O	218.25	-	-	-	-	-	-	1-Pyrenol (9CI)	-			
762	2-Chloorbifenyl	2-Chlorobiphenyl	2051-60-7	-	C12H9Cl	188.66	-	-	-	-	-	-		-			
763	4-Chloorbifenyl	4-Chlorobiphenyl	2051-62-9	-	C12H9Cl	188.66	-	-	-	-	-	-		-			
764	2,5-Dichloorbifenyl	2,5-Dichlorobiphenyl	34883-39-1	-	C12H8Cl2	223.10	-	-	-	-	-	-		-			
765	3,5-Dichloorbifenyl	3,5-Dichlorobiphenyl	34883-41-5	-	C12H8Cl2	223.10	-	-	-	-	-	-		-			
766	2,4,6-Trichloorbifenyl	2,4,6-Trichlorobiphenyl	35693-92-6	-	C12H7Cl3	257.55	-	-	-	-	-	-		-			
767	3,4',5-Trichloorbifenyl	3,4',5-Trichlorobiphenyl	38444-88-1	-	C12H7Cl3	257.55	-	-	-	-	-	-		-			
768	4-Chloor-4'-bifenylol	4-Chloro-4'-biphenylol	-	-	-	-	-	-	-	-	-	-		-			
769	Diphenyltin dichloride	Diphenyltin dichloride	1135-99-5	-	C12H10Cl2Sn	343.81	-	-	-	-	-	-		-			
771	Equol	Equol	531-95-3	-	C15H14O3	242.27	-	189-190.5°C	-	-	-	-	Phyto estrogen	S			
772	PCB 29 (2,4,5-Trichloorbifenyl)	PCB 29 (2,4,5-Trichlorobiphenyl)	15862-07-4	-	C12H7Cl3	257.55	-	-	-	-	-	-		-	Y		

Chem ID	Chemical Name Dutch	Chemical Name English	CAS	UN	Chemical Formula	Mol weight	Boiling Point	Melting Point	Density	Pressure	Solubility	Log Kow	Notes	Ph	P	D	A
773	4-Nonylfenol hepta-ethoxylaat (4-NP7EO)	4-Nonylphenol hepta-ethoxylate (4-NP7EO)	-	-	-	-	-	-	-	-	-	-	Alkylphenolpolyethoxylate				
774	3-Hydroxybifenyl	3-Hydroxybiphenyl	580-51-8	-	C12H10O	170.21	-	-	-	-	-	-	Hydroxylated PCB metabolite				
775	2,2'-Dihydroxybifenyl (2,2'-Bifenylol)	2,2'-Dihydroxybiphenyl (2,2'-Biphenylol)	1806-29-7	-	C12H10O2	186.22	-	-	-	-	-	-	Hydroxylated PCB metabolite				
776	Baygon (Propoxur)	Baygon (Propoxur)	114-26-1	-	C11H15N3	209.27	-	91°C	-	-	2 g/l	1.52	S Carbamate insecticide				
777	Oxamyl	Oxamyl	23135-22-0	-	C7H13N3O3S	219.36	-	108-110°C	-	3.1E-4 mbar at 25°C	280 g/l at 25°C	-	S Carbamate insecticide				
778	Bendiocarb	Bendiocarb	22781-23-3	-	C11H13N4	223.23	-	129-130°C	-	-	40 ppm	-	S Carbamate insecticide				
779	T2 (Parlar 26)	T2 (Parlar 26)	-	-	-	-	-	-	-	-	-	-	2-exo,3-endo,5-exo,6-endo,8,8,10,10-octachlorobornane; toxaphene congener				
780	T12 (Parlar 50)	T12 (Parlar 50)	-	-	-	-	-	-	-	-	-	-	2-exo,3-endo,5-exo,6-endo,8,8,9,10,10-Nonachlorocamphene; toxaphene congener				
781	7,12-Dimethylbenz(a)-anthracene	7,12-Dimethylbenz(a)-anthracene	57-97-6	-	C20H16	256.35	-	122-123°C	-	-	< 1 mg/ml at 18°C	-		S			
782	Flavone	Flavone	525-82-6	-	C15H10O2	222.24	-	99-100°C	-	-	Practically insoluble	-	Phyto chemical	S			
783	PCB 80 (3,3',5,5'-Tetrachloorbifenyl)	PCB 80 (3,3',5,5'-Tetrachlorobiphenyl)	-	-	-	-	-	-	-	-	-	-		-			
784	PCB 105 (2,3,3',4,4'-Pentachloorbifenyl)	PCB 105 (2,3,3',4,4'-Pentachlorobiphenyl)	32598-14-4	-	C12H5Cl5	326.42	-	-	-	-	-	-		-			

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
10	anti-androgen	2461	Strong	Severe disruption and sloughing of testicular cells
11	anti-androgen	2463		Inhibition of microtubule assembly from purified tubulin
12	suspected no endocrine effect	2464	Not applicable	Decreased percentage of pregnancies
13	suspected endocrine effect	2465		Decreased sperm production
14	suspected endocrine effect	2466		Decreased sperm production
15	gonadotropin	2468		Increased serum FSH and LH concentrations
16	suspected endocrine effect	2469		Decreased testis weight
17	androgen	2470		Increased testosterone and androgen binding protein concentrations
18	suspected endocrine effect	2471		Decreased uterine decidual cell response
19	estrogen	2472		Decreased serum LH and serum estradiol concentrations
21	gonadotropin	2472		Decreased serum LH concentrations
22	suspected endocrine effect	2473		Decreased fertility
23	suspected endocrine effect	2474		Decreased testis weight, sperm counts and sperm motility
24	suspected endocrine effect	2475		Decreased testis weight
25	sex steroid	2476		Increased resorptions, decreased litter size, fetal body weight and delayed ossification
26	suspected endocrine effect	2477		Mortality during fertilization stage
27	suspected endocrine effect	2478		Mortality during fertilization stage
28	suspected endocrine effect	2479		Reduced reproduction
29	suspected no endocrine effect	2480	Not significant	Diffenrent doses tested showed no uterotrophic activity
30	gonadotropin releasing hormone	2482		Decreased pituitary hormone production
31	suspected endocrine effect	2482		Increased oocyte stresis
32	sex steroid	2482		Impaired reproduction
33	suspected endocrine effect	2483		Increased oocyte atresia
34	gonadotropin releasing hormone	2484		Decreased pituitary and serum gonadotrophin levels
35	gonadotropin releasing hormone	2485		Decreased level of GnRH-like factor in hypothalamus
36	estrogen	2486		Decreased specific binding of estradiol to ER if combined with 200 nM toxaphene
37	estrogen	2487		Decreased specific binding of estradiol to ER if combined with 200 nM toxaphene
39	estrogen	2488		Proliferation of cells
40	thyroid hormone	2489		Increased incidence of follicular cell thyroid neoplasms
41	suspected endocrine effect	2490		Decreased viability in 4th and 5th generation
42	suspected endocrine effect	2491		Decreased viability 1st and 2nd generation; no offspring in 3th generation
43	suspected no endocrine effect	2492	Not applicable	No interaction with ER
44	suspected no endocrine effect	2493	Not applicable	No interaction with ER
45	anti-androgen	2494		Disturbed spermatogenesis

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
46	anti-androgen	2495		Disturbed spermatogenesis
47	anti-estrogen	2496		Stimulation of estron metabolism and inhibition estrogenic effect
48	anti-estrogen	2497		Increased estron metabolism and inhibition estrogenic effect
49	estrogen	2498		Proliferation of cells
50	suspected no endocrine effect	2499	Not applicable	No interaction with ER
51	suspected no endocrine effect	2500	Not applicable	No effect on binding of DHT to SHBG
52	suspected no endocrine effect	2501	Not significant	No inhibition of estradiol binding to ER
53	estrogen	2502		Significant increase in pS2 synthesis; insignificant stimulation of progesterone synthesis
54	estrogen	2503		Proliferation of cells; relative potency to estradiol: 0.0001%
55	androgen	2504		Decreased binding of 5-alpha-DHT to AR
56	estrogen	2505		Stimulation of estrogen dependent transcription; relative potency to 17b-estradiol < 0.000003
57	estrogen	2506		Stimulation of estrogen dependent transcription; relative potency to 17b-estradiol < 0.00002
58	suspected no endocrine effect	2507	Not significant	Diffenrent doses tested showed no uterotrophic activity
59	estrogen	2507		Neurotoxicity (tremors)
60	suspected no endocrine effect	2508	Not applicable	No estrogen regulated transcription of stability factor Apo II mRNA (no ER binding)
61	anti-estrogen	2509		Stimulation of estron metabolism and inhibition estrogenic effect
62	suspected endocrine effect	2510		Increased mortality of pre-weaning pups
63	gonadotropin releasing hormone	2511		Decreased pituitary hormone production
64	suspected endocrine effect	2511		Increased oocyte stresis
65	sex steroid	2511		Impaired reproduction
66	estrogen	2512		Decreased specific binding of estradiol to ER if combined with 200 nM toxaphene
67	suspected no endocrine effect	2513		No significant inhibition of tritiated 17-beta-estradiol binding to ER
68	suspected no endocrine effect	2514		No significant inhibition of R5020 binding to PR
69	gonadotropin	2515		Inhibition LH-induced GVBD
70	sex steroid	2516		Decreased GSI and oocyte diameter, oocyte disrupture
71	suspected endocrine effect	2517		Disturbed male reproductive behaviour
72	sex steroid	2518		Disturbed oocyte development and reduction in the GSI
73	sex steroid	2519		Disturbed spermatogenesis
74	suspected endocrine effect	2520		Delayed and prolonged spawning
75	estrogen	2521		Increased synthesis of progesterone and pS2 protein
76	estrogen	2522		Proliferation of cells; relative potency to estradiol: 0.0001%
77	suspected no endocrine effect	2523		No uterotrophic activity
78	gonadotropin	2524		Decreased plasma FSH and LH levels
79	anti-androgen	2524		Inhibition testicular androgen synthesis, decreased plasma and testicular testosterone levels

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
80	anti-androgen	2524		Decreased activity of steroidogenic activity (3-BHD and 17-BHD)
81	estrogen	2525		Proliferation of cells; relative potency to estradiol: 0.0001
82	estrogen	2526		Proliferation of cells; relative potency to estradiol: 0.0001
83	estrogen	2527		Binding affinity relative to estradiol: 0.0000024
84	suspected endocrine effect	2528		Increase in fetal death, growth retardation, develomental aberrations (congenital abnormalities,
85	suspected endocrine effect	2529		Developmental aberrations(fused ribs), increased incidence of meningoencephaloceles
86	suspected endocrine effect	2530		Increase in fetal mortality, decrease in fetal weight
87	suspected endocrine effect	2531		Fetal abberations
88	suspected endocrine effect	2532		Fetal weight and skeletal and visceral maturity adversely affected
89	suspected no endocrine effect	2533	Not significant	No apparent effects on the fetus
90	suspected endocrine effect	2534		Decreased fetal weight and delayed ossification
91	suspected no endocrine effect	2535	Not significant	No effect on estrous cycle
92	suspected no endocrine effect	2535	Not applicable	No effect on fertility, fecundity and number of litters
93	reproductive hormone	2536		Decreased number of eggs with normal development
94	reproductive hormone	2537		Early hatching
95	suspected endocrine effect	2537		0.31 µg/l: fry were stunted
96	suspected endocrine effect	2537		Decreased survival of progeny and fertilization rate of eggs
97	reproductive hormone	2538		Lower egg production
98	suspected endocrine effect	2539	Weak	9.6% decrease in embryo survival
99	suspected no endocrine effect	2539	Not applicable	No effect on egg production, fertility and hatching
100	suspected endocrine effect	2540		Decreased ovarian 32P uptake
101	gonadotropin releasing hormone	2540		Decreased pituitary activity
102	suspected endocrine effect	2541		Increased ovarian cholesterol
103	gonadotropin	2542		Decreased serum gonadotropin levels
104	gonadotropin releasing hormone	2542		Decreased pituitary activity
105	suspected endocrine effect	2542		Decreased testis 32P uptake, increased testis lipid content
106	suspected endocrine effect	2544		Inhibited oviposition
107	gonadotropin releasing hormone	2543		Decreased GnRH-like factor in hypothalamus
108	reproductive hormone	2545		Decreased egg production
109	reproductive hormone	2545		Shorter pregnancy
110	suspected endocrine effect	2545		Reduced hatching
111	anti-estrogen	2547		Inhibition of tritiated 17-beta-estradiol binding to ER
112	anti-estrogen	2546		55% inhibition of R5020 binding to PR
114	anti-androgen	2549		Potency of AR binding relative to 5-alpha-DHT: 0.00013

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
115	estrogen	2550		Binding affinity relative to estradiol: 0.0002
116	estrogen	2551		Proliferation of cells; relative potency to estradiol: 0.000001
117	estrogen	2552		Proliferation of cells; relative potency to estradiol: 0.0001%
118	estrogen	2554		Transcription of stability factor Apo II mRNA
119	estrogen	2553		Increased uterine LF mRNA levels.
120	estrogen	2555		Expression of PR and LF in uterus.
121	estrogen	2556		Persistent vaginal estrous, anovulation and accelerated sexual maturation
122	suspected endocrine effect	2557		Increased uterus weight
123	anti-estrogen	2558		Reduction in pituitary cytosolic PR binding
124	estrogen	2559		Proliferation of cells
125	suspected no endocrine effect	2560	Not applicable	Highest doses tested showed no uterotrophic activity
126	suspected endocrine effect	2561		Disturbed sexual development
127	anti-androgen	2562		Undecended testes in offspring
128	suspected endocrine effect	2562		Reduced weight of offspring
129	gonadotropin releasing hormone	2563		Inhibition of PMS-induced ovulation, probably caused by inhibition of LH release
130	thyroid hormone	2564		50 mg/kg: ultrastructural changes in thyroid follicular cells
131	suspected no endocrine effect	2564	Not applicable	5 mg/kg: no morphological aberrations in thyroid gland
132	suspected no endocrine effect	2565	Not applicable	No effects on egg laying, shell thickness, hatching, embryonation and embryo and chick survival
133	suspected no endocrine effect	2566	Not applicable	No effects on egg laying, shell thickness, hatching, embryonation and embryo and chick survival
134	suspected no endocrine effect	2567	Not applicable	No effects on egg laying, egg weight, shell calcium content or shell thickness
135	suspected no endocrine effect	2568	Not applicable	No effects on egg laying, egg weight, shell calcium content or shell thickness
136	reproductive hormone	2569		Decreased reproduction
137	reproductive hormone	2569		17.8 mg/kg: cessation in reproduction
138	reproductive hormone	2570		Decreased reporduction
139	suspected endocrine effect	2570		Reduced viability of neonates
140	anti-estrogen	2571		Inhibition of estradiol induced vitellogenesis
141	estrogen	2572		Decreased specific binding of estradiol to ER if combined with 220 nM chlordane or 630 nM dieldrin
142	suspected no endocrine effect	2572	Not applicable	Individual substance no effect on binding of estradiol to ER
143	suspected no endocrine effect	2572	Not applicable	Mixture of chlordane, dieldrin and toxaphene no effect
144	suspected no endocrine effect	2486	Not applicable	Individual substance no effect on binding of estradiol to ER
145	suspected no endocrine effect	2487	Not applicable	Individual substance no effect on binding of estradiol to ER
146	suspected no endocrine effect	2486	Not applicable	Mixture of chlordane, dieldrin and toxaphene no effect
147	suspected no endocrine effect	2487	Not applicable	Mixture of chlordane, dieldrin and toxaphene no effect
148	suspected no endocrine effect	2512	Not applicable	Individual substance no effect on binding of estradiol to ER

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
149	suspected no endocrine effect	2512	Not applicable	Mixture of chlordane, dieldrin and toxaphene no effect
150	suspected no endocrine effect	2573		No ER binding
151	thyroid releasing hormone	2574		Hypersecretion of TSH, goiter
152	thyroid hormone	2575		Ultrastructural changes in thyroid follicular cells
153	suspected no endocrine effect	2576	Not applicable	No interaction with ER
154	anti-estrogen	2492		Mixture of chlordane with dieldrin or toxaphene reduced specific binding of estradiol to ER
155	anti-estrogen	2493		Mixture of chlordane with dieldrin or toxaphene reduced specific binding of estradiol to ER
156	anti-estrogen	2576		Mixture of toxaphene with chlordane or dieldrin reduced specific binding of estradiol to ER
157	anti-estrogen	2499		Mixture of dieldrin and chlordane or toxaphene reduced specific binding of estradiol to ER
158	anti-estrogen	2577		Inhibition of constitutive and 17-beta-estradiol induced ER-dependent transactivation
159	anti-estrogen	2577		Suppression of ER-mediated transcription of pS2-RNA and translation of pS2-protein
160	estrogen	2578		Increased synthesis of progesterone and pS2 protein
161	estrogen	2578		Binding affinity for ER relative to estradiol: 0.0000032
162	estrogen	2579		Proliferation of cells; relative potency to estradiol: 0.0001%
163	anti-estrogen	2580		Inhibition of estrogen regulated transcription of Apo II mRNA
164	anti-estrogen	2581		Stimulation of estron metabolism and inhibition estrogenic effect
165	thyroid hormone	2582		Increased incidence of thyroid tumours in both sexes
166	suspected no endocrine effect	2583	Not applicable	No effects on egg laying, shell thickness, hatching or growth of progeny
167	suspected no endocrine effect	2584	Not applicable	No effects on egg laying, shell thickness, hatching or growth of progeny
168	suspected no endocrine effect	2585	Not applicable	No effects on reproduction
169	reproductive hormone	2586		Delayed spawning; no effect on spawning succes and number of offspring
170	suspected endocrine effect	2586		Accelerated growth
171	suspected no endocrine effect	2587		No effects on plasma hormone concentrations, GAM aromatase activity, CAF hormone
172	suspected no endocrine effect	2587		No sex reversal
173	suspected no endocrine effect	2588		No effects on hatching and survival of chicks
174	suspected no endocrine effect	2589		No effects on hatching and survival of chicks
175	suspected no endocrine effect	2590		No effects on egg laying of hatched females
176	suspected no endocrine effect	2590		No effects on testis weight and sperm count of hatched males
177	suspected endocrine effect	2592		Altered sex ratio (also because of reduced survival of females)
178	suspected no endocrine effect	2593		No ER binding
179	suspected no endocrine effect	2594		No PR binding
180	suspected endocrine effect	2595		Decreased plasma testosterone concentrations
181	estrogen	2596		Altered sex ratio in favour of females
182	thyroid hormone	2597		Hypothyroidism

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
183	estrogen	2598		Proliferation of cells; relative potency to estradiol: 0.0001%
184	suspected endocrine effect	2599		Decreased ovulation rate
185	suspected endocrine effect	2600		Ovarian stromal cell hyperplasia
186	suspected endocrine effect	2600		Hepatocellular changes
187	suspected no endocrine effect	2601		No effect on tritiated 5-alpha-DHT binding to SHBG
188	estrogen	2602		10% inhibition of estradiol binding to ER
189	estrogen	2607		Increased cell proliferation, relative potency to estradiol: 0.000001
190	androgen	2603		40-50% decrease in [3H]5-alpha-DHT binding to ABP
191	androgen	2604		80% inhibition of [3H]5-alpha-DHT binding to AR
192	anti-androgen	2605		Inhibition of androgen binding to AR
193	anti-androgen	2605		Inhibition of androgen-induced transcriptional activity
194	anti-androgen	2606		Potency of AR binding relative to 5-alpha-DHT: 0.00028
195	estrogen	2608		Increased uterine glycogen content, relative potency to DES: 0.000025
196	suspected endocrine effect	2609		Egg shell thinning
197	estrogen	2609		Feminization of male embryos
198	suspected endocrine effect	2610		Altered (reproductive) behavior in 2nd generation
199	estrogen	2681		Induction of vitellogenesis
200	anti-estrogen	2612		45% inhibition of R5020 binding to PR
201	anti-estrogen	2611		Inhibition of tritiated 17-beta-estradiol binding to ER
202	suspected no endocrine effect	2613		No feminization of males
203	suspected no endocrine effect	2614		No effects on plasma hormone concentrations, GAM aromatase activity, CAF hormone
204	suspected no endocrine effect	2614		No sex reversal
205	suspected no endocrine effect	2615		No anti-androgenic effects
206	anti-androgen	2616		Weak antagonist of AR binding
207	suspected no endocrine effect	2616		No inhibition of conversion of testosterone to 5-alpha-DHT
208	suspected no endocrine effect	2617		No inhibition of conversion of testosterone to 5-alpha-DHT
209	suspected no endocrine effect	2618		No inhibition of conversion of testosterone to 5-alpha-DHT
210	anti-androgen	2617		Effective antagonist of AR binding
211	anti-androgen	2618		Effective antagonist of AR binding
212	anti-androgen	2619		Hypospadias, cleft phallus
213	anti-androgen	2619		Suprainguinal ectopic testes, epididymal and testicular granulomas
214	anti-androgen	2619		Vaginal pouch
215	anti-androgen	2619		Atrophic seminal vesicles and ventral prostate gland
216	anti-androgen	2620		Potency of AR binding relative to 5-alpha-DHT: 0.00001

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
217	anti-androgen	2621		Antagonist of AR binding
218	anti-androgen	2621		80% inhibition of androgen induced (50 nM 5-alpha-DHT) transactivation
219	androgen	2622		Induction of androgen mediated transactivation in absence of 5-alpha-DHT
220	androgen	2625		Induction of androgen mediated transactivation in absence of 5-alpha-DHT
221	anti-androgen	2623		Antagonist of AR binding
222	anti-androgen	2623		80% inhibition of androgen induced (50 nM 5-alpha-DHT) transactivation
223	anti-androgen	2624		Antagonist of AR binding
224	anti-androgen	2624		80% inhibition of androgen induced (50 nM 5-alpha-DHT) transactivation
225	anti-androgen	2619		Male offspring with female anogenital distance, nipple development at 2 weeks of age
226	anti-androgen	2619		Failure of ejaculation, reduced accessory sex glands
227	anti-androgen	2626		7 days: reduction in absolute and relative weight of seminal vesicles and epididymus
228	anti-androgen	2626		14 days: reduction in relative weight of testis and absolute weight of epididymus
229	anti-androgen	2627		Reduced weight of seminal vesicles and prostate
230	anti-androgen	2627		Reduced histochemical staining of AR in epididymal nuclei
231	anti-androgen	2627		Reduction of testosterone repressed prostatic message 2 mRNA (TRPM-2)
232	anti-androgen	2627		Repression of testosterone induced prostatic message prostatein subunit C3 mRNA
233	anti-androgen	2628		Reduced weight of seminal vesicles and prostate
234	anti-androgen	2628		Reduced histochemical staining of AR in epididymal nuclei
235	anti-androgen	2628		Reduction of testosterone repressed prostatic message 2 mRNA (TRPM-2)
236	anti-androgen	2628		Repression of testosterone induced prostatic message prostatein subunit C3 mRNA
237	thyroid hormone	2629		Increase in thyroid weight
238	thyroid hormone	2630		Thyroid follicular cell hyperplasia
239	thyroid hormone	2631		Decreased thyroxine levels
240	thyroid hormone	2632		Decreased T4 values
241	thyroid hormone	2633		Thyroid follicular cell hyperplasia
242	thyroid hormone	2632		Increased thyroid weight
243	suspected endocrine effect	2633		Increased HSI
244	thyroid hormone	2634		Thyroid follicular cell hyperplasia
245	thyroid hormone	2635		Thyroid follicular cell hyperplasia
246	thyroid hormone	2636		Increased thyroid weight
247	thyroid releasing hormone	2637		Decrease in cold-induced TSH response
248	thyroid releasing hormone	2637		Inhibition of TSH secretion
249	gonadotropin releasing hormone	2638		Dose related block of LH surge
250	suspected endocrine effect	2638		Inhibition of ovulation if administered during sensitive period prior to the initiation of the LH surge

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
251	suspected no endocrine effect	2639		No effects on thyroid peroxidase or iodinating activity
252	suspected endocrine effect	2640		Inhibition of peroxidase activity
253	suspected endocrine effect	2641		Blocked iodinating activity
254	thyroid hormone	2642		Decreased serum T4 concentrations
255	suspected endocrine effect	2642		40 mg/kg: depletion of germcells in testis, decreased testicular weight
256	thyroid hormone	2642		Thyroid follicular cell hyperplasia
257	thyroid hormone	2643		Morphological changes of thyroid
258	thyroid hormone	2644		Thyroidal hyperplasia
259	thyroid hormone	2645		Thyroid follicular cell hyperplasia
260	suspected endocrine effect	2646		Goitrogenic effects
261	suspected endocrine effect	2647		Adverse effects on reproduction: sterility, decreased fertility, resorption of fetuses
262	suspected no endocrine effect	2648		No effects during critical period of organaogenesis
263	suspected no endocrine effect	2648		No maternal or embryo/fetotoxicity
264	suspected endocrine effect	2649		Teratogenic effects
265	thyroid releasing hormone	2650		Decrease in cold-induced TSH response
266	thyroid releasing hormone	2650		Inhibition of TSH secretion
267	thyroid releasing hormone	2651		No effect on TSH concentrations
268	thyroid hormone	2651		Decreased serum T3 and T4 levels
269	thyroid hormone	2651		Enlargement of thyroid
270	suspected no endocrine effect	2651		No effects on serum testosterone or testicular enzyme activity
271	suspected no endocrine effect	2651		No morphological changes of testis
272	suspected endocrine effect	2652		Inhibition of peroxidase activity
273	suspected endocrine effect	2653		Increase in sperm abnormalities
274	suspected endocrine effect	2654		Increase in sperm abnormalities
275	thyroid hormone	2655		Thyroid follicular cell hypertrophy
276	thyroid hormone	2655		Increased thyroid weight
277	thyroid hormone	2691		Decreased plasma T3 and T4 levels
278	gonadotropin	2656		Increased serum LH concentrations
279	gonadotropin	2656		Non significant increased serum FSH concentrations
280	suspected endocrine effect	2656		Non significant decrease in serum testosterone levels
281	suspected no endocrine effect	2658		No significant inhibition of estradiol binding to ER
282	suspected no endocrine effect	2659		No effect on [3H]5-alpha-DHT binding to ABP
283	androgen	2660		20-30% decrease in [3H]5-alpha-DHT binding to SHBG
284	androgen	2661		50% inhibition in [3H]5-alpha-DHT binding to SHBG

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
285	androgen	2662		50% inhibition in [3H]5-alpha-DHT binding to AR
286	suspected no endocrine effect	2663		No effects on estrogen regulated transcription of Apo II mRNA
287	suspected no endocrine effect	2664		No effects on serum estradiol and uterine progesterone concentrations
288	suspected no endocrine effect	2664		No effects on ER binding
289	suspected no endocrine effect	2664		No effects on pituitary and uterus weight
290	suspected no endocrine effect	2665		No effects on serum estradiol concentrations
291	suspected no endocrine effect	2665		No effects on pituitary weight
292	suspected no endocrine effect	2665		No effets on ER distribition and PR binding
293	suspected endocrine effect	2666		Reduced ovulation rate
294	suspected endocrine effect	2667		Reduced testicular weight
295	suspected endocrine effect	2668		Reduced testicular weight
296	suspected endocrine effect	2668		Degeneration of Leydig cells
297	suspected endocrine effect	2668		Decreased serum testosterone concentrations
298	anti-estrogen	2669		Delayed vaginal opening and disrupted ovarian cycle
299	anti-estrogen	2669		Decreased serum and pituitary LH and prolactin levels
300	suspected endocrine effect	2669		Decreased pituitary and uterus weight
301	anti-estrogen	2669		Increased pituitary FSH levels
302	anti-estrogen	2670		Lower estradiol benzoate induced increase in serum LH
303	suspected endocrine effect	2669		10 mg/kg: increased serum estrogen
304	suspected endocrine effect	2669		40 mg/kg: decreased serum estrogen
305	suspected endocrine effect	2670		Decreased uterus weight
306	anti-estrogen	2670		Smaller estradiol benzoate induced decrease in pituitary LH, FSH and prolactin
307	suspected endocrine effect	2671		Decreased testis weight
308	suspected endocrine effect	2671		Cell abnormalities in testis
309	anti-androgen	2671		Inhibition of spermatogenesis
310	anti-estrogen	2672		Delayed vaginal opening and disrupted ovarian cycle
311	suspected endocrine effect	2672		Reduced pituitary and uterus weight
312	suspected endocrine effect	2673		At adulthood: reduced testicular weight
313	suspected endocrine effect	2674		At adulthood: reduced testicular weight
314	anti-androgen	2673		At adulthood: reduced number of sperm and spermatids
315	anti-androgen	2674		At adulthood: reduced number of sperm and spermatids
316	anti-androgen	2673		At adulthood and puberty: reduced serum testosterone levels
317	anti-androgen	2674		At puberty: reduced serum testosterone levels
318	suspected endocrine effect	2675		Reduced serum testosterone concentrations

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
319	suspected endocrine effect	2675		Reduced sexual behaviour
320	suspected no endocrine effect	2675		No effects on number of sperm and spermatids and testis weight
321	suspected no endocrine effect	2676		No effects on reproductive function
322	suspected endocrine effect	2677		Failure in implantation and fetotoxicity
323	suspected no endocrine effect	2678		No effects on reproduction and maturation
324	suspected endocrine effect	2679		Induction of MFO enzyme in liver of 3rd generation offspring
325	anti-estrogen	2680		Dosing daily and thrice aweek: 18-21% egg shell thinning
326	estrogen	2682		Induction of vitellogenesis
327	estrogen	2681		Hermaphroditism
328	estrogen	2682		Hermaphroditism
329	gonadotropin	2683		Decreased gonadotropin levels
330	suspected endocrine effect	2683		Decreased GSI
331	steroid	2684		Altered steroid synthesis
332	suspected endocrine effect	2685		Sex dependent alteration of lipid metabolism required for ovarian recrudescence
333	steroid	3723		Induction of PXR-mediated transcription
334	sex steroid	2686		Decreased plasma sex steroids
335	sex steroid	2687		Decreased plasma and ovarian steroid levels
336	gonadotropin releasing hormone	2687		Impaired GnRH secretion
337	gonadotropin	2687		Impaired GTH secretion
338	gonadotropin releasing hormone	2688		Inhibition of oLH-RH action
339	gonadotropin	2688		Inhibition of mGTH action
340	suspected endocrine effect	2688		Alteration of lipid metabolism required for ovarian recrudescence
341	estrogen	2689		Induction of ER and VTG mRNA
342	estrogen	2690		Induction of ER and VTG mRNA
343	thyroid hormone	2692		Decreased T3 and increased T4 levels
344	thyroid hormone	2692		Decreased T3/T4 ratio
345	suspected no endocrine effect	2693		No estrogenic effects
346	anti-androgen	2694		Potency of AR binding relative to 5-alpha-DHT: 0.00005
347	anti-androgen	2695		Decreased weight of epididymus, prostate and seminal vesicles
348	anti-androgen	2695		Sexually mature rats: Increased serum estradiol and LH levels
349	anti-androgen	2696		P: Increased serum estradiol and LH levels
350	anti-androgen	2696		F1: Increased serum estradiol and LH levels (Lower effect than P)
351	anti-androgen	2697		50% inhibition of testosterone binding to AR; potency relative to 5-alpha-DHT: 0.00002
352	anti-estrogen	2699		Inhibition of priming effect for 17,20-beta-P, testosterone and GTH II

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
353	suspected endocrine effect	2698		Reduction in mating performance
354	suspected endocrine effect	2698		Increased reproduction time to first litter
355	thyroid hormone	2700		5-1 5 mg/kg: decreased serum T4 levels
356	thyroid hormone	2700		10-15 mg/kg: decreased serum T3 levels
357	thyroid hormone	2700		10-15 mg/kg: inhibition of extrathyroidal 5'-monodeiodination of T4 to T3
359	thyroid hormone	2701		Decreased serum T3 levels
360	thyroid hormone	2701		Increased serum T4 levels
361	thyroid hormone	2701		Inhibition of extrathyroidal 5'-monodeiodination of T4 to T3
362	suspected endocrine effect	2702		Atresia of ovaries, no egg maturation
363	suspected endocrine effect	2702		Unable to spawn after up to 9 weeks recovery
364	thyroid hormone	2704		Decreased serum T3 and T4
365	thyroid releasing hormone	2704		Increased TSH secretion
366	thyroid hormone	2705		Decreased serum T3 and T4
367	thyroid releasing hormone	2705		Increased TSH secretion
368	thyroid hormone	2706		Decreased serum T3 and T4
369	thyroid releasing hormone	2706		Increased TSH secretion
370	suspected no endocrine effect	2707		No significant effects on thyroid secretory function
371	thyroid hormone	2708		Decreased serum T3 and T4
372	thyroid hormone	2708		Decreased T4/T3 ratio
373	thyroid releasing hormone	2708		Increased TSH secretion
374	sex steroid	2703		Decreased plasma sex steroids
375	thyroid hormone	2709		Decreased plasma T4 level
376	thyroid hormone	2709		Increased plasma T3 level
377	thyroid hormone	2709		Increased T3/T4 ratio
378	gonadotropin	2710		Decreased serum and pituitary GTH
379	suspected endocrine effect	2710		Increased testis lipid content
380	suspected endocrine effect	2711		Decreased ovarian DNA, RNA and protein content
381	suspected endocrine effect	2711		Histopathological effects on oögenesis
382	gonadotropin	2712		Inhibition LH-induced GVBD
383	gonadotropin	2713		Inhibition LH-induced GVBD
384	gonadotropin	2714		Inhibition LH-induced GVBD
385	gonadotropin	2715		Inhibition LH-induced GVBD
386	gonadotropin	2716		Inhibition LH-induced GVBD
387	reproductive hormone	2717		Decreased oviposition

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
388	reproductive hormone	2718		Decreased oviposition
389	gonadotropin releasing hormone	2719		Decreased pituitary and serum gonadotrophin levels
390	gonadotropin releasing hormone	2720		Decreased level of GnRH-like factor in hypothalamus
391	suspected endocrine effect	2721		Decreased ovarian estrogen level
392	suspected endocrine effect	2721		Decreased GSI
393	suspected endocrine effect	2722		Decreased ovarian estrogen level
394	suspected endocrine effect	2722		Decreased GSI
395	suspected endocrine effect	2723		Brood abandonment
396	suspected endocrine effect	2724		Brood abandonment
397	suspected endocrine effect	2725		Depression of brain ChE activity
398	suspected no endocrine effect	2725		No significant effects on clutch size and hatching
399	suspected endocrine effect	2726		Decreased brood size
400	suspected endocrine effect	2726		Reduction in growth
401	suspected no endocrine effect	2727		Decreased brain acetylcholinesterase activity and muscarinic receptor binding
402	gonadotropin	2728		Inhibition of spermatogenesis
403	thyroid hormone	2729		Decreased plasma T3 and T4 levels
404	thyroid releasing hormone	2729		Increased TSH secretion
405	thyroid hormone	2729		Thyroid hypertrophy, hyperplasia and neoplasia
406	suspected endocrine effect	2730		Liver and thyroid tumours
407	suspected endocrine effect	2731		Increased thyroid weight
408	suspected endocrine effect	2732		Thyroid and pituitary tumours
409	suspected endocrine effect	2733		Increased thyroid weight
410	suspected endocrine effect	2733		Goiters, thyroid hyperplasia
411	thyroid hormone	2733		Decreased T3 and T4 levels
412	suspected endocrine effect	2734		Increased thyroid weight
413	suspected endocrine effect	2734		Goiters, thyroid hyperplasia
414	suspected endocrine effect	2735		Increased thyroid weight
415	suspected endocrine effect	2735		Goiters, thyroid hyperplasia
416	thyroid hormone	2734		Decreased T3 and T4 levels
417	suspected endocrine effect	2736		Thyroid hyperplasia
418	suspected no endocrine effect	2737		No effect on [3H] 5-alpha-DHT binding to SHBG
419	suspected no endocrine effect	2738		No significant inhibition of estradiol binding to ER
420	androgen	2739		40-50% decrease in [3H]5-alpha-DHT binding to ABP
421	androgen	2740		30-40% inhibition in [3H]5-alpha-DHT binding to AR

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
422	suspected no endocrine effect	2741		No induction of ER-mediated responses
423	suspected no endocrine effect	2743		No ER-mediated growth
424	suspected no endocrine effect	2742		No induction of ER-mediated responses
425	suspected endocrine effect	2744		Increased pituitary wet weight (hyperaemia and hypertrophy)
426	suspected endocrine effect	2744		Reduced activity of steroid metabolizing enzymes
427	suspected endocrine effect	2745		Female pups: increased 5-alpha-steroid reductase activity
428	suspected no endocrine effect	2745		Female pups: no effects on pituitary androgen metabolism
429	suspected endocrine effect	2745		Male pups: decreased 3-alpha-hydroxysteroid dehydrogenase and 5-alpha-steroid reductase
430	suspected endocrine effect	2745		Male pups: decreased number of androgen-specific binding sites in prostate
431	suspected no endocrine effect	2745		Male pups: no effects pituitary metabolism
432	suspected endocrine effect	2746		Hyperplasia of mammary gland and prostate
433	suspected endocrine effect	2747		Mammary fibroadenomas and adenocarcinomas
434	estrogen	2748		75 mg/kg: disrupted 4-day ovarian cycle
435	estrogen	2749		75 mg/kg: disrupted 4-day ovarian cycle
436	estrogen	2748		150 mg/kg: repetitive pseudopregnancies
437	estrogen	2749		150 mg/kg: repetitive pseudopregnancies
438	estrogen	2749		300 mg/kg: repetitive pseudopregnancies
439	suspected no endocrine effect	2748		300 mg/kg: regression of ovaries and anestrous condition
440	suspected endocrine effect	2750		Prolongation of estrous cycle: increase of days in estrus, decrease of days in diestrus
441	suspected endocrine effect	2751		Decrease of days in estrus, increase of days in diestrus
442	suspected endocrine effect	2750		Cornification of vaginal epithelium
443	anti-estrogen	2750		Decrease in circulating estradiol levels
444	anti-estrogen	2751		Decrease in circulating estradiol levels
445	suspected no endocrine effect	2752		No sex reversal
446	suspected no endocrine effect	2752		No effects on hatchling plasma hormone concentrations or gonadal aromatase activity
447	suspected no endocrine effect	2752		No effects on CAF hormone concentrations
448	anti-estrogen	2753		Inhibition of [3H]17-beta-estradiol binding to ER
449	anti-estrogen	2754		35% inhibition of R5020 binding to PR
450	suspected no endocrine effect	2755		No induction of ER-mediated responses
451	suspected no endocrine effect	2756		No induction of ER-mediated responses
452	suspected no endocrine effect	2757		No ER-mediated growth
453	suspected endocrine effect	2758		Prolongation of estrous cycle: increase of days in estrus, decrease of days in diestrus
454	suspected endocrine effect	2758		Cornification of vaginal epithelium
455	suspected endocrine effect	2759		Decrease of days in estrus, increase of days in diestrus

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
456	anti-estrogen	2758		Decrease in circulating estradiol levels
457	anti-estrogen	2759		Decrease in circulating estradiol levels
458	suspected no endocrine effect	2760		No interaction with ER
459	anti-estrogen	2760		Mixture of dieldrin and alachlor reduced specific binding of estradiol to ER
460	suspected no endocrine effect	2761		No significant reproductive toxicity
461	gonadotropin releasing hormone	2762		Increase in circulating TSH levels from day 7 (reversible)
462	gonadotropin	2762		Decrease in circulating T4 levels from day 7
463	gonadotropin	2762		Increase in circulating T3 levels (reversible)
464	suspected endocrine effect	2762		Increased thyroid weight
465	anti-estrogen	2763		Inhibition of tritiated 17-beta-estradiol binding to ER
466	suspected no endocrine effect	2764		No PR binding
467	suspected endocrine effect	2765		Decreased sperm counts, sperm viability and motility
468	suspected endocrine effect	2765		Increase of specific abnormalities of sperm: tapered or absent heads, abnormal tails)
469	suspected endocrine effect	2766		Decreased sperm velocity and semen volume
470	suspected endocrine effect	2767		Reduced fertility rates
471	suspected no endocrine effect	2768		No effects on reproductive performance
472	suspected no endocrine effect	2768		No histopathological lesions in liver, kidney, lung, brain, spleen, adrenal gland or testis
473	suspected endocrine effect	2769		Decreased sperm velocity, motility and ALH
474	suspected endocrine effect	2769		Decreased ejaculate volume
475	suspected endocrine effect	2770		Abnormal oestrous cycle (reversible)
476	suspected endocrine effect	2771		Reduced testosterone concentrations
477	suspected endocrine effect	2771		Failure to impregnate females
478	suspected endocrine effect	2771		Atrophy of testes, epididymus, prostate and seminal vesicles
479	estrogen	2772		Increased cell proliferation
480	suspected endocrine effect	2773		Decreased blood progesterone and estradiol levels
481	suspected no endocrine effect	2774		No effects on serum T3, T4 or TSH
482	gonadotropin	2775		Females: decreased serum estrogen and progesterone levels
483	gonadotropin	2995		Decreased plasma FSH levels
484	suspected endocrine effect	2775		Females: decrease in implantations
485	suspected endocrine effect	2775		Females: increase in resorptions
486	suspected endocrine effect	2775		Males: decreased sperm counts
487	suspected endocrine effect	2776		Decreased plasma testosterone concentrations (reversible)
488	suspected no endocrine effect	2776		No lasting effects on sperm quality or spermatogenesis
489	suspected no endocrine effect	2790		No effect on fertility

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
490	suspected endocrine effect	2777		Decreased sperm motility
491	suspected endocrine effect	2778		Decreased sperm density
492	suspected endocrine effect	2778		Increased percentage of abnormal sperm
493	thyroid hormone	2779		Decreased serum T4 levels
494	suspected endocrine effect	2780		Decreased serum testosterone concentrations
495	suspected endocrine effect	2780		Increased in vitro hepatic microsomal testosterone metabolism
496	suspected endocrine effect	2781		Decreased serum testosterone concentrations
497	reproductive hormone	2782		Decreased fertility
499	suspected endocrine effect	2783		Histopathology of testes leading to retarded maturation
500	suspected endocrine effect	2784		Reduced litter size
501	suspected endocrine effect	2784		Increased number of stillbirths
502	thyroid hormone	2785		Thyroid tumours in males
503	thyroid hormone	2786		Decreased serum T3 levels, no effect on serum T4
504	suspected endocrine effect	2786		Increased thyroid size
505	thyroid hormone	2787		Decreased serum T4 levels, Slight decrease in serum T3 levels
506	thyroid hormone	2788		Decreased serum T4 levels
507	thyroid hormone	2788		Increased serum T3 levels
508	suspected endocrine effect	2788		Increased thyroid size
509	thyroid hormone	2789		Decreased serum levels of total and free T3
510	thyroid hormone	2789		Decreased serum levels of total and free T4
511	retinoid hormone	2789		Disturbed retinoid hormone homeostasis
512	suspected endocrine effect	2790		F1: increased incidence of parathyroid adenomas
513	estrogen	2791		Stimulation of cell proliferation; relative potency to estradiol: 0.000003
514	estrogen	2792		Increased cell proliferation
515	estrogen	2794		Induction of VTG gene expression
516	estrogen	2795		Induction of VTG gene expression
517	estrogen	2796		Induction of VTG gene expression
518	estrogen	2797		Induction of VTG gene expression
519	estrogen	2798		Stimulation of cell proliferation
520	estrogen	2799		Stimulation of cell proliferation
521	estrogen	2800		Stimulation of cell proliferation
522	estrogen	2801		Stimulation of cell proliferation
523	estrogen	2802		Stimulation of cell proliferation
524	estrogen	2803		Stimulation of cell proliferation

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
525	estrogen	2804		Stimulation of cell proliferation
526	estrogen	2805		Stimulation of cell proliferation
527	estrogen	2806		Induction of ER-mediated transcription
528	estrogen	2807		Induction of ER-mediated transcription
529	estrogen	2808		Induction of ER-mediated transcription
530	estrogen	2809		Induction of ER-mediated transcription
531	estrogen	2810		Induction of VTG gene expression
532	estrogen	2811		Induction of VTG gene expression
533	estrogen	2812		Induction of VTG gene expression
534	estrogen	2813		Induction of VTG gene expression
535	estrogen	2814		Induction of VTG gene expression
536	estrogen	2815		Induction of VTG gene expression
537	suspected no endocrine effect	2816		No significant estrogen dependent gene expression
538	suspected no endocrine effect	2817		No significant estrogen dependent gene expression
539	suspected no endocrine effect	2818		No significant estrogen dependent gene expression
540	estrogen	2819		Induction of estrogen dependent transcription
541	estrogen	2820		Induction of estrogen dependent transcription
542	estrogen	2821		Induction of estrogen dependent transcription
543	estrogen	2822		Accelerated vaginal opening
544	suspected endocrine effect	2973		Aggressive behavior of males and females to a same-sex conspecific
545	estrogen	2822		200 mg/kg: increased uterus weight
546	estrogen	2823		Increased uterus weight; relative potency (%) to estradiol: 0.049
547	estrogen	2824		Inhibition of radiolabeled estradiol binding to ER
548	estrogen	2825		Inhibition of radiolabeled estradiol binding to ER; relative potency (%) to estradiol: 515.7
549	estrogen	2826		Inhibition of radiolabeled estradiol binding to ER; relative potency (%) to estradiol: 100
550	estrogen	2827		Inhibition of radiolabeled estradiol binding to ER; relative potency (%) to estradiol: 90
551	estrogen	2828		Inhibition of radiolabeled estradiol binding to ER; relative potency (%) to estradiol: 5.4
552	anti-estrogen	2829		Inhibition of radiolabeled estradiol binding to ER; relative potency (%) to estradiol: 0.31
553	estrogen	2830		Inhibition of radiolabeled estradiol binding to ER; relative potency (%) to estradiol: 0.027
554	estrogen	2831		Inhibition of radiolabeled estradiol binding to ER; relative potency (%) to estradiol: 0.015
555	estrogen	2832		Inhibition of radiolabeled estradiol binding to ER; relative potency (%) to estradiol: 0.012
556	estrogen	2833		Inhibition of radiolabeled estradiol binding to ER; relative potency (%) to estradiol: 0.011
557	estrogen	2834		Inhibition of radiolabeled estradiol binding to ER; relative potency (%) to estradiol: 0.005
558	estrogen	2835		Inhibition of radiolabeled estradiol binding to ER; relative potency (%) to estradiol: 0.1

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
559	estrogen	2836		Increased serum VTG
560	estrogen	2836		Upregulation of hepatic ER
561	estrogen	2837		Increased serum VTG
562	estrogen	2837		Upregulation of hepatic ER
563	estrogen	2837		Males: increased HSI
564	estrogen	2838		RBA compared to radiolabeled 17-beta-estradiol (%): 0.05
565	estrogen	2839		RBA compared to radiolabeled 17-beta-estradiol (%): 0.09
566	estrogen	2840		RBA compared to radiolabeled 17-beta-estradiol (%): 7
567	estrogen	2841		RBA compared to radiolabeled 17-beta-estradiol (%): 2
568	estrogen	2842		RBA compared to radiolabeled 17-beta-estradiol (%): 236
569	estrogen	2843		RBA compared to radiolabeled 17-beta-estradiol (%): 221
570	estrogen	2844		RBA compared to radiolabeled 17-beta-estradiol (%): 2
571	estrogen	2845		RBA compared to radiolabeled 17-beta-estradiol (%): 0.2
572	estrogen	2846		RBA compared to radiolabeled 17-beta-estradiol (%): 29
573	estrogen	2847		RBA compared to radiolabeled 17-beta-estradiol (%): 80
574	estrogen	2848		RBA compared to radiolabeled 17-beta-estradiol (%): 1.3
575	estrogen	2849		RBA compared to radiolabeled 17-beta-estradiol (%): 0.9
576	estrogen	2850		RBA compared to radiolabeled 17-beta-estradiol (%): 76
577	estrogen	2851		RBA compared to radiolabeled 17-beta-estradiol (%): 10
578	estrogen	2852		RBA compared to radiolabeled 17-beta-estradiol (%): 1
579	estrogen	2853		RBA compared to radiolabeled 17-beta-estradiol (%): 7
580	estrogen	2860		RBA compared to radiolabeled 17-beta-estradiol (%): 0.01
581	estrogen	2861		RBA compared to radiolabeled 17-beta-estradiol (%): 0.02
582	anti-estrogen	2854		RBA compared to radiolabeled estradiol (%): 4
583	anti-estrogen	2855		RBA compared to radiolabeled estradiol (%): 3
584	anti-estrogen	2856		RBA compared to radiolabeled estradiol (%): 257
585	anti-estrogen	2857		RBA compared to radiolabeled estradiol (%): 232
586	anti-estrogen	2858		RBA compared to radiolabeled estradiol (%): 69
587	anti-estrogen	2859		RBA compared to radiolabeled estradiol (%): 16
588	estrogen	2862		RBA compared to radiolabeled 17-beta-estradiol (%): 0.01
589	estrogen	2863		RBA compared to radiolabeled 17-beta-estradiol (%): 0.03
590	estrogen	2864		RBA compared to radiolabeled 17-beta-estradiol (%): 0.02
591	estrogen	2865		RBA compared to radiolabeled 17-beta-estradiol (%): 0.07
592	estrogen	2866		RBA compared to radiolabeled 17-beta-estradiol (%): 0.01

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
593	estrogen	2867		RBA compared to radiolabeled 17-beta-estradiol (%): 0.01
594	estrogen	2868		RBA compared to radiolabeled 17-beta-estradiol (%): 0.06
595	estrogen	2869		RBA compared to radiolabeled 17-beta-estradiol (%): 0.1
596	estrogen	2870		RBA compared to radiolabeled 17-beta-estradiol (%): < 0.01
597	estrogen	2871		RBA compared to radiolabeled 17-beta-estradiol (%): 0.03
598	estrogen	2872		RBA compared to radiolabeled 17-beta-estradiol (%): 0.1
599	estrogen	2873		RBA compared to radiolabeled 17-beta-estradiol (%): 0.13
600	estrogen	2874		RBA compared to radiolabeled 17-beta-estradiol (%): 0.3
601	estrogen	2875		RBA compared to radiolabeled 17-beta-estradiol (%): 0.2
602	estrogen	2876		RBA compared to radiolabeled 17-beta-estradiol (%): 0.09
603	estrogen	2877		RBA compared to radiolabeled 17-beta-estradiol (%): 0.03
604	estrogen	2878		RBA compared to radiolabeled 17-beta-estradiol (%): 0.3
605	estrogen	2879		RBA compared to radiolabeled 17-beta-estradiol (%): 0.5
606	estrogen	2880		RBA compared to radiolabeled 17-beta-estradiol (%): 0.11
607	estrogen	2881		RBA compared to radiolabeled 17-beta-estradiol (%): 0.11
608	estrogen	2882		RBA compared to radiolabeled 17-beta-estradiol (%): 0.13
609	estrogen	2883		RBA compared to radiolabeled 17-beta-estradiol (%): 0.12
610	estrogen	2884		RBA compared to radiolabeled 17-beta-estradiol (%): 0.06
611	estrogen	2885		RBA compared to radiolabeled 17-beta-estradiol (%): 0.04
612	estrogen	2886		RBA compared to radiolabeled 17-beta-estradiol (%): 0.18
613	estrogen	2887		RBA compared to radiolabeled 17-beta-estradiol (%): 0.23
614	estrogen	2888		RBA compared to radiolabeled 17-beta-estradiol (%): 2.4
615	estrogen	2889		RBA compared to radiolabeled 17-beta-estradiol (%): 4.7
616	estrogen	2890		RBA compared to radiolabeled 17-beta-estradiol (%): 3.4
617	estrogen	2891		RBA compared to radiolabeled 17-beta-estradiol (%): 7.2
618	estrogen	2892		RBA compared to radiolabeled 17-beta-estradiol (%): 0.03
619	estrogen	2893		RBA compared to radiolabeled 17-beta-estradiol (%): 0.02
620	estrogen	2894		RBA compared to radiolabeled 17-beta-estradiol (%): 0.03
621	estrogen	2895		RBA compared to radiolabeled 17-beta-estradiol (%): 0.04
622	estrogen	2896		RBA compared to radiolabeled 17-beta-estradiol (%): 0.09
623	estrogen	2897		RBA compared to radiolabeled 17-beta-estradiol (%): 0.1
624	estrogen	2898		RBA compared to radiolabeled 17-beta-estradiol (%): 0.01
625	estrogen	2899		RBA compared to radiolabeled 17-beta-estradiol (%): < 0.01
626	estrogen	2900		RBA compared to radiolabeled 17-beta-estradiol (%): 0.07

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
627	estrogen	2901		RBA compared to radiolabeled 17-beta-estradiol (%): 0.06
628	estrogen	2902		RBA compared to radiolabeled 17-beta-estradiol (%): 0.1
629	estrogen	2903		RBA compared to radiolabeled 17-beta-estradiol (%): 0.1
630	estrogen	2904		RBA compared to radiolabeled 17-beta-estradiol (%): 0.1
631	estrogen	2905		RBA compared to radiolabeled 17-beta-estradiol (%): 0.1
632	estrogen	2906		RBA compared to radiolabeled 17-beta-estradiol (%): 20
633	estrogen	2907		RBA compared to radiolabeled 17-beta-estradiol (%): 140
634	estrogen	2908		RBA compared to radiolabeled 17-beta-estradiol (%): 7
635	estrogen	2909		RBA compared to radiolabeled 17-beta-estradiol (%): 5
636	estrogen	2910		RBA compared to radiolabeled 17-beta-estradiol (%): 4
637	estrogen	2911		RBA compared to radiolabeled 17-beta-estradiol (%): 87
638	estrogen	2912		RBA compared to radiolabeled 17-beta-estradiol (%): 0.1
639	estrogen	2913		RBA compared to radiolabeled 17-beta-estradiol (%): 0.5
640	estrogen	2914		RBA compared to radiolabeled 17-beta-estradiol (%): 0.3
641	estrogen	2915		RBA compared to radiolabeled 17-beta-estradiol (%): 6
642	estrogen	2916		RBA compared to radiolabeled 17-beta-estradiol (%): 0.1
643	estrogen	2917		RBA compared to radiolabeled 17-beta-estradiol (%): 3
644	estrogen	2918		RBA compared to radiolabeled 17-beta-estradiol (%): 0.01
645	estrogen	2919		RBA compared to radiolabeled 17-beta-estradiol (%): 0.04
646	estrogen	2920		RBA compared to radiolabeled 17-beta-estradiol (%): 0.01
647	estrogen	2921		RBA compared to radiolabeled 17-beta-estradiol (%): 0.11
648	estrogen	2922		RBA compared to radiolabeled 17-beta-estradiol (%): 0.2
649	estrogen	2923		RBA compared to radiolabeled 17-beta-estradiol (%): 0.7
650	estrogen	2924		RTA for ERalpha compared to radiolabeled 17-beta-estradiol (%): 117
651	estrogen	2924		RTA for ERbeta compared to radiolabeled 17-beta-estradiol (%): 69
652	estrogen	2927		RTA for ERalpha compared to radiolabeled 17-beta-estradiol (%): 7
653	estrogen	2927		RTA for ERbeta compared to radiolabeled 17-beta-estradiol (%): 2
654	estrogen	2926		RTA for ERalpha compared to radiolabeled 17-beta-estradiol (%): 54
655	estrogen	2926		RTA for ERbeta compared to radiolabeled 17-beta-estradiol (%): 10
656	anti-estrogen	2925		RTA for ERalpha compared to radiolabeled 17-beta-estradiol (%): 6
657	anti-estrogen	2925		RTA for ERbeta compared to radiolabeled 17-beta-estradiol (%): 2
658	estrogen	2928		RTA for ERalpha compared to radiolabeled 17-beta-estradiol (%): 3
659	estrogen	2928		RTA for ERbeta compared to radiolabeled 17-beta-estradiol (%): 3
660	estrogen	2929		RTA for ERalpha compared to radiolabeled 17-beta-estradiol (%): 1

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
661	estrogen	2929		RTA for ERbeta compared to radiolabeled 17-beta-estradiol (%): 1
662	estrogen	2930		RTA for ERalpha compared to radiolabeled 17-beta-estradiol (%): 77
663	estrogen	2930		RTA for ERbeta compared to radiolabeled 17-beta-estradiol (%): 62
664	estrogen	2931		RTA for ERalpha compared to radiolabeled 17-beta-estradiol (%): 68
665	estrogen	2931		RTA for ERbeta compared to radiolabeled 17-beta-estradiol (%): 41
666	estrogen	2932		RTA for ERalpha compared to radiolabeled 17-beta-estradiol (%): 70
667	estrogen	2932		RTA for ERbeta compared to radiolabeled 17-beta-estradiol (%): 51
668	estrogen	2933		RTA for ERalpha compared to radiolabeled 17-beta-estradiol (%): 61
669	estrogen	2933		RTA for ERbeta compared to radiolabeled 17-beta-estradiol (%): 57
670	estrogen	2934		RTA for ERalpha compared to radiolabeled 17-beta-estradiol (%): 62
671	estrogen	2934		RTA for ERbeta compared to radiolabeled 17-beta-estradiol (%): 34
672	estrogen	2935		RTA for ERalpha compared to radiolabeled 17-beta-estradiol (%): 50
673	estrogen	2935		RTA for ERbeta compared to radiolabeled 17-beta-estradiol (%): 41
674	estrogen	2936		RTA for ERalpha compared to radiolabeled 17-beta-estradiol (%): 9
675	estrogen	2936		RTA for ERbeta compared to radiolabeled 17-beta-estradiol (%): 2
676	estrogen	2937		RTA for ERalpha compared to radiolabeled 17-beta-estradiol (%): 6
677	estrogen	2937		RTA for ERbeta compared to radiolabeled 17-beta-estradiol (%): 1
678	estrogen	2938		RTA for ERalpha compared to radiolabeled 17-beta-estradiol (%): 27
679	estrogen	2938		RTA for ERbeta compared to radiolabeled 17-beta-estradiol (%): 1
680	estrogen	2939		RTA for ERalpha compared to radiolabeled 17-beta-estradiol (%): 53
681	estrogen	2939		RTA for ERbeta compared to radiolabeled 17-beta-estradiol (%): 72
682	estrogen	2940		RTA for ERalpha compared to radiolabeled 17-beta-estradiol (%): 102
683	estrogen	2940		RTA for ERbeta compared to radiolabeled 17-beta-estradiol (%): 98
684	estrogen	2941		RTA for ERalpha compared to radiolabeled 17-beta-estradiol (%): 91
685	estrogen	2941		RTA for ERbeta compared to radiolabeled 17-beta-estradiol (%): 27
686	estrogen	2942		RTA for ERalpha compared to radiolabeled 17-beta-estradiol (%): 198
687	estrogen	2942		RTA for ERbeta compared to radiolabeled 17-beta-estradiol (%): 182
688	estrogen	2943		RTA for ERalpha compared to radiolabeled 17-beta-estradiol (%): 97
689	estrogen	2943		RTA for ERbeta compared to radiolabeled 17-beta-estradiol (%): 80
690	estrogen	2944		RTA for ERalpha compared to radiolabeled 17-beta-estradiol (%): 50
691	estrogen	2944		RTA for ERbeta compared to radiolabeled 17-beta-estradiol (%): 49
692	estrogen	2945		RTA for ERalpha compared to radiolabeled 17-beta-estradiol (%): 35
693	estrogen	2945		RTA for ERbeta compared to radiolabeled 17-beta-estradiol (%): 53
694	estrogen	2946		RTA for ERalpha compared to radiolabeled 17-beta-estradiol (%): 3

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
695	estrogen	2946		RTA for ERbeta compared to radiolabeled 17-beta-estradiol (%): 2
696	estrogen	2927		RTA for ERalpha compared to radiolabeled 17-beta-estradiol (%): 36
697	estrogen	2927		RTA for ERbeta compared to radiolabeled 17-beta-estradiol (%): 45
698	estrogen	2948		RTA for ERalpha compared to radiolabeled 17-beta-estradiol (%): 49
699	estrogen	2948		RTA for ERbeta compared to radiolabeled 17-beta-estradiol (%): 10
700	estrogen	2949		RTA for ERalpha compared to radiolabeled 17-beta-estradiol (%): 6
701	estrogen	2949		RTA for ERbeta compared to radiolabeled 17-beta-estradiol (%): 2
702	estrogen	2950		RTA for ERalpha compared to radiolabeled 17-beta-estradiol (%): 36
703	estrogen	2950		RTA for ERbeta compared to radiolabeled 17-beta-estradiol (%): 53
704	estrogen	2951		RTA for ERalpha compared to radiolabeled 17-beta-estradiol (%): 11
705	estrogen	2951		RTA for ERbeta compared to radiolabeled 17-beta-estradiol (%): 3
706	estrogen	2952		RTA for ERalpha compared to radiolabeled 17-beta-estradiol (%): 1
707	estrogen	2952		RTA for ERbeta compared to radiolabeled 17-beta-estradiol (%): 2
708	estrogen	2953		RTA for ERalpha compared to radiolabeled 17-beta-estradiol (%): 2
709	estrogen	2953		RTA for ERbeta compared to radiolabeled 17-beta-estradiol (%): 2
710	estrogen	2954		Induction of cell proliferation
711	estrogen	2954		Maximum cell proliferation: 2.7 ng/ml
712	estrogen	2955		Induction of cell proliferation
713	estrogen	2955		Maximum cell proliferation: 2.7 ng/ml
714	estrogen	2956		Induction of cell proliferation
715	estrogen	2956		Maximum cell proliferation: 0.032 µg/ml
716	estrogen	2957		Induction of cell proliferation
717	estrogen	2957		Maximum cell proliferation: 1 µg/ml
718	estrogen	2958		Induction of cell proliferation
719	estrogen	2958		Maximum cell proliferation: 1 µg/ml
720	estrogen	2959		Induction of cell proliferation
721	estrogen	2959		Maximum cell proliferation: 2.28 µg/ml
722	estrogen	2960		Induction of cell proliferation
723	estrogen	2960		Maximum cell proliferation: 10 µg/ml
724	estrogen	2961		Induction of cell proliferation
725	estrogen	2961		Maximum cell proliferation: 0.1 µg/ml
726	estrogen	2962		Induction of cell proliferation
727	estrogen	2962		Maximum cell proliferation: 0.1 µg/ml
728	estrogen	2963		Induction of cell proliferation

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
729	estrogen	2964		Induction of cell proliferation
730	progestogen	2965		Inhibition of hPR activity
731	progestogen	2966		Inhibition of hPR activity
732	progestogen	2967		Inhibition of hPR activity
733	progestogen	2968		Reduction of R5020 binding to hPR
734	progestogen	2969		Reduction of R5020 binding to hPR
735	progestogen	2970		Reduction of R5020 binding to hPR
736	retinoid hormone	2971		NOEC for retinol reduction: 2 ng TEQ/g lipid
737	retinoid hormone	2971		EC90 for retinol reduction: 5 ng TEQ/g lipid
738	thyroid hormone	2972		Increased total and free plasma T4
739	suspected endocrine effect	2973		0.018 ng/g: enlarged preputial glands in males
740	suspected endocrine effect	2974		Aggressive behavior of males and females to a same-sex conspecific
741	suspected endocrine effect	2974		Decreased testes weight
742	estrogen	2975		Increased estrogen responsive transcription of LF and G6PD mRNA transcription
743	suspected endocrine effect	2976		Increased frequencies of embryo malformations
744	progestogen	2977		Inhibition of 20-beta-S binding to its receptor
745	progestogen	2977		Inhibition of 20-beta-S mediated FOM
746	progestogen	2978		Inhibition of 20-beta-S binding to its receptor
747	progestogen	2978		Inhibition of 20-beta-S mediated FOM
748	suspected endocrine effect	2979		Delayed embryo development
749	suspected endocrine effect	2979		Craniofacial malformations
750	suspected endocrine effect	2979		Increased embryo and larval mortality
751	suspected endocrine effect	2980		Delayed embryo development and hatching
752	suspected endocrine effect	2981		Craniofacial malformations
753	suspected endocrine effect	2980		Increased embryo and larval mortality
754	suspected endocrine effect	2980		Atresia of ovary
755	suspected endocrine effect	2980		Failure of spermatogenesis
756	suspected endocrine effect	2981		Delayed embryo development and hatching
757	suspected endocrine effect	2981		Lordosis in female and scoliosis in both sexes
758	suspected endocrine effect	2981		Atresia of ovary
759	suspected endocrine effect	2981		Failure of spermatogenesis
760	suspected endocrine effect	2982		Increased embryo and larval mortality
761	suspected endocrine effect	2982		Atresia of ovary
762	suspected endocrine effect	2982		Failure of spermatogenesis

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
763	estrogen	2984		High degree of embryo mortality (72%)
764	suspected no endocrine effect	2983		41% embryo mortality
765	estrogen	2984		Strong induction of ER mRNA in males
766	suspected no endocrine effect	2985		14% embryo mortality
767	suspected no endocrine effect	2986		14% embryo mortality
768	suspected no endocrine effect	2987		19% embryo mortality
769	suspected no endocrine effect	2988		24% embryo mortality
770	suspected no endocrine effect	2989		25% embryo mortality
771	suspected no endocrine effect	2989		No induction of ER mRNA in males
772	suspected no endocrine effect	2990		26% embryo mortality
773	suspected no endocrine effect	2991		27% embryo mortality
774	estrogen	2992		High degree of embryo mortality (81%)
775	estrogen	2992		Strong induction of ER mRNA in males
776	estrogen	2993		High degree of embryo mortality (79%)
777	estrogen	2993		1 µmol/kg: 95% embryo mortality
778	estrogen	2993		Strong induction of ER mRNA in males
782	neurohormone	2994		Decreased 5-HT levels in hypothalamus
783	neurohormone	2995		Decreased 5-HT levels in hypothalamus
784	neurohormone	2994		Increased 5-HT turnover in anterior hypothalamus and median eminence
785	neurohormone	2995		Increased 5-HT turnover in anterior and posterior hypothalamus
786	neurohormone			
787	androgen	2994		Increased plasma testosterone levels
789	anti-androgen	2995		Decreased plasma testosterone levels
790	suspected endocrine effect	2994		Age dependent accumulation of Cd in hypothalamus and testes
791	suspected endocrine effect	2995		Age dependent accumulation of Cd in hypothalamus, pituitary and testes
792	suspected endocrine effect	2996		Thyroid dysfunction
793	suspected endocrine effect	2997		Abnormal sperm and low sperm density
794	suspected endocrine effect	2998		Abnormal sperm and low sperm density
795	suspected endocrine effect	2997		Cryptorchidism
796	suspected endocrine effect	2998		Cryptorchidism
797	suspected endocrine effect	2997		No significant difference between serum estradiol levels in males and females
798	suspected endocrine effect	2998		No significant difference between serum estradiol levels in males and females
799	estrogen	2999		Induction of estrogen-mediated gene transcription
800	estrogen	3000		Induction of estrogen-mediated gene transcription

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
801	estrogen	3001		Induction of estrogen mediated gene expression
802	estrogen	3002		Induction of estrogen mediated gene expression
803	estrogen	3003		Induction of estrogen mediated gene expression
804	suspected no endocrine effect	3004		No induction of estrogen mediated gene expression
805	suspected no endocrine effect	3005		No induction of estrogen mediated gene expression
806	suspected no endocrine effect	3006		No induction of estrogen mediated gene expression
807	suspected no endocrine effect	3007		No induction of estrogen mediated gene expression
808	suspected no endocrine effect	3008		No induction of estrogen mediated gene expression
809	estrogen	3001		Relative potency to estradiol: 0.001
810	estrogen	3002		Relative potency to estradiol: 0.0001
811	estrogen	3003		Relative potency to estradiol: 0.0005
812	anti-estrogen	3009		Induction of AhR-mediated gene expression
813	anti-estrogen	3009		Relative potency to TCDD: 0.05
814	anti-estrogen	3010		Induction of AhR-mediated gene expression
815	anti-estrogen	3010		Relative potency to TCDD: 0.05
816	anti-estrogen	3011		Induction of AhR-mediated gene expression
817	anti-estrogen	3011		Relative potency to TCDD: 0.01
818	anti-estrogen	3012		Induction of AhR-mediated gene expression
819	anti-estrogen	3012		Relative potency to TCDD: 0.0001
820	anti-estrogen	3013		Induction of AhR-mediated gene expression
821	anti-estrogen	3013		Relative potency to TCDD: 0.00001
822	anti-estrogen	3014		Induction of AhR-mediated gene expression
823	anti-estrogen	3014		Relative potency to TCDD: 0.00001
824	anti-estrogen	3015		Induction of AhR-mediated gene expression
825	suspected no endocrine effect	3016		No induction of AhR-mediated gene expression
826	suspected no endocrine effect	3017		No induction of AhR-mediated gene expression
827	suspected no endocrine effect	3018		No induction of AhR-mediated gene expression
828	thyroid hormone	3019		Increased T4 plasma free T4 levels
829	thyroid hormone	3019		Females: combination with 10 ppb aldicarb and 1 ppm methomyl increased T4 plasma free T4 levels
830	thyroid hormone	3020		Increased T4 plasma free T4 levels
831	thyroid hormone	3021		Increased T4 plasma free T4 levels
832	estrogen	3022		Complete, permanent male-to-female sex reversal
833	suspected no endocrine effect	3022		LC50 = 511 ng/egg
834	estrogen	3023		Complete, permanent male-to-female sex reversal

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
835	suspected endocrine effect	3024		Highly significant positive correlation between female TBT body burden and intersex index (0-12
836	suspected endocrine effect	3024		Highly significant positive correlation between sediment TBT concentration and intersex index in
837	suspected endocrine effect	3024		Highly significant positive correlation between sediment TBT concentration and female prostate
838	suspected endocrine effect	3024		Highly significant positive correlation between sediment TBT concentration and % of sterile females
839	suspected endocrine effect	3024		Highly significant negative correlation between male TBT body burden and reduction of male penial
840	suspected endocrine effect	3024		11 mg/kg dry weight in males: 75% reduction of male penial glands
841	suspected no endocrine effect	3025		No increase in intersex index
842	suspected endocrine effect	3026		Females: concentration dependent occurrence of intersex stages
843	suspected endocrine effect	3026		Males: concentration dependent reduction of male penial glands
844	suspected endocrine effect	3027		Increased incidence of imposex
845	suspected endocrine effect	3028		Concentration dependent increase in imposex
846	suspected no endocrine effect	3029		No imposex
847	estrogen	3030		Inhibition of radiolabeled estradiol binding to ER
848	estrogen	3031		Inhibition of radiolabeled estradiol binding to ER
849	estrogen	3031		Relative potency to 17-beta-estradiol: 0.001
850	estrogen	3030		Relative potency to 17-beta-estradiol: 0.00002
851	estrogen	3032		Inhibition of radiolabeled estradiol binding to ER
852	estrogen	3032		Relative potency to 17-beta-estradiol: 0.0006
853	estrogen	3033		Inhibition of radiolabeled estradiol binding to ER
854	estrogen	3034		Significantly increased serum vitellogenin
855	estrogen	3035		Slightly increased serum vitellogenin
856	estrogen	3036		Significantly increased serum vitellogenin
857	estrogen	3037		Inhibition of CYP450 aromatase
858	estrogen	3038		Inhibition of CYP450 aromatase
859	estrogen	3039		Inhibition of CYP450 aromatase
860	estrogen	3040		Inhibition of CYP450 aromatase
861	estrogen	3041		Inhibition of CYP450 aromatase
862	estrogen	3042		Inhibition of CYP450 aromatase
863	estrogen	3043		Inhibition of CYP450 aromatase
864	suspected no endocrine effect	3044		No inhibition of CYP450 aromatase
865	suspected no endocrine effect	3045		No effects on adrenal steroid hormone levels
866	insulin	3045		< 2 years exposure: acute increased serum insulin levels
867	insulin	3045		2-6 years exposure: decreased serum insulin levels
868	insulin	3045		> 6 years exposure: serum insulin levels back to normal

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
869	androgen	3045		Decreased serum levels of testosterone and SHBG
870	suspected endocrine effect	3046		Increased incidence in breastcancer
871	suspected endocrine effect	3047		Increased incidence in breastcancer
872	suspected endocrine effect	3048		Increased incidence in breastcancer
873	estrogen	3049		Inhibition of tritiated estradiol binding to ER
874	estrogen	3050		Inhibition of tritiated estradiol binding to ER
875	estrogen	3051		Inhibition of tritiated estradiol binding to ER
876	estrogen	3049		Potency relative to 17-beta-estradiol: 0.009
877	estrogen	3050		Potency relative to 17-beta-estradiol: 0.21
878	estrogen	3051		Potency relative to 17-beta-estradiol: 0.003
879	estrogen	3052		Induction of estrogen mediated gene expression
880	estrogen	3053		Induction of estrogen mediated gene expression
881	estrogen	3055		Induction of cell proliferation
882	anti-estrogen	3054		Inhibition of estrogen induced gene expression
883	estrogen	3056		Induction of cell proliferation
884	estrogen	3057		Not dose dependent induction of cell proliferation
885	estrogen	3058		Increased uterus wet weight
886	estrogen	3058		All concentrations: induction of vaginal cornification
887	estrogen	3059		Increased uterus wet weight
888	estrogen	3059		Induction of vaginal cornification
889	suspected endocrine effect	3060		Reproductive impairment
890	suspected endocrine effect	3061		Reproductive impairment
891	estrogen	3062		1-3 µg/kg: promotion of endometriosis
892	suspected no endocrine effect	3062		10 µg/kg: ovarian toxicity
893	estrogen	3062		Dose dependent induction of EROD activity
894	estrogen	3063		100 µg/kg: promotion of endometriosis
895	estrogen	3063		Dose dependent induction of EROD activity
896	estrogen	3064		Dose dependent induction of EROD activity
897	suspected no endocrine effect	3064		No promotion of endometriosis
898	suspected no endocrine effect	3065		No promotion of endometriosis
899	suspected no endocrine effect	3065		No induction of EROD activity
900	suspected no endocrine effect	3066		No promotion of endometriosis
901	suspected no endocrine effect	3066		No induction of EROD activity
902	estrogen	3067		100% sex reversal male to female

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
903	suspected endocrine effect	3067		Increased plasma testosterone levels
904	estrogen	3068		100% sex reversal male to female
905	suspected endocrine effect	3068		Increased plasma and CAF testosterone levels
906	suspected endocrine effect	3068		Increased Gam aromatase activity
907	suspected endocrine effect	3069		Decreased plasma testosterone concentrations
908	suspected endocrine effect	3069		Decreased GAM aromatase activity
909	estrogen	3070		10% reduction of tritiated 17-beta-estradiol binding to ER
910	estrogen	3071		60% reduction of tritiated 17-beta-estradiol binding to ER
911	estrogen	3072		20% reduction of [3H]17-beta-estradiol binding to ER
912	estrogen	3073		75% reduction of tritiated 17-beta-estradiol binding to ER
913	estrogen	3074		10% reduction of tritiated 17-beta-estradiol binding to ER
914	suspected no endocrine effect	3075		No significant inhibition of tritiated 17-beta-estradiol binding to ER
915	androgen	3076		100% inhibition of tritiated 5-alpha-DHT binding to AR
916	androgen	3077		90% inhibition of tritiated 5-alpha-DHT binding to AR
917	androgen	3078		50% inhibition of [3H]5-alpha-DHT binding to AR
918	androgen	3079		30-40% inhibition of [3H]5-alpha-DHT binding to AR
919	suspected no endocrine effect	3080		No effect on tritiated 5-alpha-DHT binding on AR
920	suspected no endocrine effect	3081		No effect on tritiated 5-alpha-DHT binding on AR
921	androgen	3082		70% decrease in [3H]5-alpha-DHT binding to ABP
922	androgen	3083		40-50% decrease in tritiated 5-alpha-DHT binding to ABP
923	androgen	3084		20% decrease in tritiated 5-alpha-DHT binding to ABP
924	androgen	3085		70% decrease in tritiated 5-alpha-DHT binding to SHBG
925	androgen	3086		20-30% decrease in [3H]5-alpha-DHT binding to SHBG
926	androgen	3087		20-30% decrease in tritiated 5-alpha-DHT binding to SHBG
927	androgen	3088		20-30% decrease in [3H]5-alpha-DHT binding to SHBG
928	suspected no endocrine effect	3089		No effect on tritiated 5-alpha-DHT binding to SHBG
929	suspected no endocrine effect	3090		No effect on tritiated 5-alpha-DHT binding to SHBG
930	androgen	3084		IC50 = 6.8 µM
931	estrogen	3071		IC50 = 40 µM
932	androgen	3082		IC50 = 38 µM
933	androgen	2661		IC50 = 160 µM
934	estrogen	3091		Induction of estrogen mediated gene transcription
935	estrogen	3091		Relative potency to 17-beta-estradiol: 0.0000005
936	estrogen	3092		Induction of estrogen mediated gene transcription

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
937	estrogen	3092		Relative potency to 17-beta-estradiol: 0.0000001
938	estrogen	3093		Induction of estrogen mediated gene transcription
939	estrogen	3093		Relative potency to 17-beta-estradiol: 0.0000001
940	estrogen	3094		Induction of estrogen mediated gene transcription
941	estrogen	3094		Relative potency to 17-beta-estradiol: 0.000001
942	suspected no endocrine effect	3095		No induction of estrogen mediated gene transcription
943	suspected no endocrine effect	3096		No induction of estrogen mediated gene transcription
944	estrogen	3097		Induction of cell proliferation
945	estrogen	3098		Induction of cell proliferation
946	estrogen	3099		Induction of cell proliferation
947	estrogen	3100		Induction of cell proliferation
948	estrogen	3101		Induction of estrogen mediated gene transcription
949	suspected no endocrine effect	3102		No induction of cell proliferation
950	suspected no endocrine effect	3103		No induction of cell proliferation
951	suspected no endocrine effect	3104		No induction of cell proliferation
952	suspected no endocrine effect	3105		No induction of cell proliferation
953	suspected no endocrine effect	3106		No induction of cell proliferation
954	suspected no endocrine effect	3107		No induction of estrogen mediated gene transcription
955	suspected no endocrine effect	3108		No induction of estrogen mediated gene transcription
956	suspected no endocrine effect	3109		No induction of estrogen mediated gene transcription
957	suspected no endocrine effect	3110		No induction of estrogen mediated gene transcription
958	suspected no endocrine effect	3111		No induction of estrogen mediated gene transcription
959	suspected no endocrine effect	3112		No induction of estrogen mediated gene transcription
960	suspected no endocrine effect	3113		No induction of estrogen mediated gene transcription
961	suspected no endocrine effect	3114		No induction of estrogen mediated gene transcription
962	estrogen	3115		Induction of cell proliferation
963	estrogen	3116		Induction of cell proliferation
964	estrogen	3117		Induction of cell proliferation
965	estrogen	3118		Induction of cell proliferation
966	suspected no endocrine effect	3119		No induction of cell proliferation
967	suspected no endocrine effect	3120		No induction of cell proliferation
968	suspected no endocrine effect	3121		No induction of cell proliferation
969	suspected no endocrine effect	3122		No induction of cell proliferation
970	suspected no endocrine effect	3123		F0: no effects on fertility or number of offspring

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
971	suspected no endocrine effect	3123		Decreased number of live pups per litter
972	suspected endocrine effect	3123		F1 (1%): decrease of indices of mating, pregnancy and fertility
973	suspected endocrine effect	3123		F1 (1%): decreased epididymal sperm counts and testicular spermatid head counts
974	suspected endocrine effect	3123		F1 (1%): Degeneration of seminiferous tubules
975	suspected endocrine effect	3123		F1 (1%): underdeveloped or defective epididymides
976	suspected no endocrine effect	3123		F1: no ovarian or uterine lesions
977	estrogen	3124		Induction of estrogen-mediated gene expression
978	estrogen	3125		Induction of estrogen-mediated gene expression
979	estrogen	3126		Induction of estrogen-mediated gene expression
980	estrogen	3127		Induction of estrogen-mediated gene expression
981	estrogen	3128		Induction of estrogen-mediated gene expression
982	estrogen	3129		Induction of estrogen-mediated gene expression
983	estrogen	3124		Relative potency to 17-beta-estradiol: 0.001
984	suspected no endocrine effect	3130		No induction of estrogen mediated gene expression
985	estrogen	3131		Reduction of tritiated 17-beta-estradiol binding to ER
986	estrogen	3131		Relative potency to 17-beta-estradiol: 0.001
987	estrogen	3132		Reduction of tritiated 17-beta-estradiol binding to ER
988	estrogen	3132		Relative potency to 17-beta-estradiol: 0.0001
989	estrogen	3133		Reduction of tritiated 17-beta-estradiol binding to ER
990	estrogen	3134		Reduction of tritiated 17-beta-estradiol binding to ER
991	estrogen	3135		Reduction of tritiated 17-beta-estradiol binding to ER
992	estrogen	3136		Reduction of tritiated 17-beta-estradiol binding to ER
993	estrogen	3137		Induction of estrogen-mediated gene expression (full agonist)
994	estrogen	3137		Relative potency to 17-beta-estradiol: 0.001
995	estrogen	3138		Induction of estrogen-mediated gene expression (full agonist)
996	estrogen	3138		Relative potency to 17-beta-estradiol: 0.0001
997	estrogen	3139		Induction of estrogen-mediated gene expression (partial agonist)
998	estrogen	3140		Induction of estrogen-mediated gene expression
999	estrogen	3141		Induction of estrogen-mediated gene expression
1000	estrogen	3142		Induction of estrogen-mediated gene expression
1001	suspected no endocrine effect	3143		No induction of estrogen mediated gene expression
1002	suspected endocrine effect	3144		Increased hepatic P450 enzyme activities
1003	thyroid hormone	3144		32-346 mg/kg: decreased serum total T4
1004	suspected endocrine effect	3145		Increased hepatic P450 enzyme activities

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
1005	thyroid hormone	3145		38-382 mg/kg: decreased serum total T4
1006	suspected endocrine effect	3146		Increased hepatic P450 enzyme activities
1007	thyroid hormone	3146		12 mg/kg: increased serum total T4
1008	thyroid hormone	3146		38-175 mg/kg: decreased serum total T4
1009	estrogen	3147		Displacement of tritiated estradiol from ER
1010	estrogen	3148		Displacement of tritiated estradiol from ER
1011	estrogen	3149		Displacement of tritiated estradiol from ER
1012	estrogen	3151		Displacement of tritiated estradiol from ER
1013	estrogen	3150		Displacement of tritiated estradiol from ER
1014	estrogen	3152		Displacement of tritiated estradiol from ER
1015	estrogen	3153		Displacement of tritiated estradiol from ER
1016	estrogen	3154		Displacement of tritiated estradiol from ER
1017	estrogen	3155		Displacement of tritiated estradiol from ER
1018	estrogen	3156		Displacement of tritiated estradiol from ER
1019	estrogen	3157		Displacement of tritiated estradiol from ER
1020	estrogen	3158		Displacement of tritiated estradiol from ER
1021	estrogen	3159		Displacement of tritiated estradiol from ER
1022	estrogen	3160		Displacement of tritiated estradiol from ER
1023	estrogen	3161		Displacement of tritiated estradiol from ER
1024	estrogen	3162		Displacement of tritiated estradiol from ER
1025	estrogen	3163		Displacement of tritiated estradiol from ER
1026	estrogen	3164		Enhanced mammary gland differentiation
1027	estrogen	3164		Increased mammary gland epithelial cell proliferation
1028	estrogen	3165		Enhanced mammary gland differentiation
1029	estrogen	3165		Increased mammary gland epithelial cell proliferation
1030	estrogen	3165		Increased mammary gland size
1031	estrogen	3165		Increased uterine-ovarian weight
1032	estrogen	3166		Enhanced mammary gland differentiation
1033	estrogen	3166		Increased mammary gland epithelial cell proliferation
1034	estrogen	3166		Increased uterine-ovarian weight
1035	anti-estrogen	3167		Inhibition of mammary gland epithelial cell proliferation
1036	anti-estrogen	3167		Inhibition of mammary gland development
1037	anti-estrogen	3167		Decreased mammary gland size
1038	anti-estrogen	3167		Decreased uterine-ovarian weight

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
1039	estrogen	3170		Atypical estrogen in this animal model: increased uterine wet and dry weight without uterine
1040	anti-estrogen	3168		Not significant inhibition of mammary gland epithelial cell proliferation
1041	anti-estrogen	3168		Not significant inhibition of mammary gland development
1042	anti-estrogen	3169		Not significant inhibition of mammary gland epithelial cell proliferation
1043	anti-estrogen	3169		Not significant inhibition of mammary gland development
1044	estrogen	3170		Atypical estrogen in this animal model: induction of cytosolic ER without cytosolic depletion and
1045	estrogen	3170		Increased sensitivity of uterus to estradiol
1046	estrogen	3171		Atypical estrogen in this animal model: increased uterine wet and dry weight without uterine
1047	estrogen	3171		Atypical estrogen in this animal model: induction of cytosolic ER without cytosolic depletion and
1048	estrogen	3171		Increased sensitivity of uterus to estradiol
1049	estrogen	3172		Reduction of [3H]17-beta-estradiol binding to ER
1050	estrogen	3173		Reduction of [3H]17-beta-estradiol binding to ER
1051	estrogen	3174		Reduction of [3H]17-beta-estradiol binding to ER
1052	estrogen	3175		Reduction of tritiated 17-beta-estradiol binding to ER
1053	estrogen	3176		Reduction of tritiated 17-beta-estradiol binding to ER
1054	estrogen	3177		Reduction of tritiated 17-beta-estradiol binding to ER
1055	estrogen	3178		Reduction of tritiated 17-beta-estradiol binding to ER
1056	estrogen	3179		Reduction of tritiated 17-beta-estradiol binding to ER
1057	estrogen	3180		Reduction of tritiated 17-beta-estradiol binding to ER
1058	estrogen	3181		Induction of ER-mediated cell proliferation
1059	estrogen	3182		Induction of ER-mediated cell proliferation
1060	estrogen	3183		Induction of ER-mediated cell proliferation
1061	estrogen	3184		Induction of ER-mediated gene transcription
1062	estrogen	3185		Induction of ER-mediated gene transcription
1063	estrogen	3186		Induction of ER-mediated gene transcription
1064	estrogen	3187		100% sex reversal male to female
1065	estrogen	3188		50% sex reversal male to female
1066	estrogen	3189		100% sex reversal male to female
1067	estrogen	3190		100 µg: 20% sex reversal male to female
1068	estrogen	3190		200 µg: 100% sex reversal male to female
1069	estrogen	3191		200 µg: 25% sex reversal male to female
1070	estrogen	3190		Synergism in combination with 2',3',4',5'-tetrachloro-4-biphenylol
1071	estrogen	3191		Synergism in combination with 2',4',6'-trichloro-4-biphenylol
1072	estrogen	3192		100% sex reversal male to female

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
1073	suspected no endocrine effect	3193		No effect on TSD
1074	suspected no endocrine effect	3194		No effect on TSD
1075	suspected no endocrine effect	3195		No effect on TSD
1076	suspected no endocrine effect	3196		No effect on TSD
1077	suspected no endocrine effect	3197		No effect on TSD
1078	suspected no endocrine effect	3198		No effect on TSD
1079	suspected no endocrine effect	3199		No effect on TSD
1080	suspected no endocrine effect	3200		No effect on TSD
1081	suspected no endocrine effect	3201		No effect on TSD
1082	estrogen	3202		Dose dependent induction of cell proliferation
1083	estrogen	3203		Dose dependent induction of cell proliferation
1084	estrogen	3204		Dose dependent induction of cell proliferation
1085	estrogen	3205		Dose dependent induction of cell proliferation
1086	estrogen	3206		Dose dependent induction of cell proliferation
1087	estrogen	3202		Additive effects in combination with 17-beta-estradiol
1088	estrogen	3203		Additive effects in combination with 17-beta-estradiol
1089	estrogen	3204		Additive effects in combination with 17-beta-estradiol
1090	estrogen	3206		Additive effects in combination with 17-beta-estradiol
1091	estrogen	3207		Increased estrogen-regulated gene expresssion
1092	estrogen	3208		Increased estrogen-regulated gene expresssion
1093	estrogen	3209		Increased estrogen-regulated gene expresssion
1094	estrogen	3210		Transactivation of estrogen-responsive gene
1095	estrogen	3211		Transactivation of estrogen-responsive gene
1096	estrogen	3212		Transactivation of estrogen-responsive gene
1097	estrogen	3213		Transactivation of estrogen-responsive gene
1098	estrogen	3214		Transactivation of estrogen-responsive gene
1099	estrogen	3215		Inhibition of 17-beta-estradiol oxidoreductase
1100	estrogen	3216		Inhibition of reduction of tritiated estrone to tritiated estradiol
1101	estrogen	3217		Inhibition of reduction of tritiated estrone to tritiated estradiol
1102	estrogen	3218		Inhibition of reduction of tritiated estrone to tritiated estradiol
1103	estrogen	3219		5-25 µg/ kg: increased relative uterus weight
1104	estrogen	3219		1-25 µg/kg: increased peroxidase activity
1105	estrogen	3219		5-25 µg/kg: induction of cell proliferation
1106	estrogen	3219		5-25 µg/kg: increased LF expression

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
1107	estrogen	3220		5-25 mg/kg: increased relative uterus weight
1108	estrogen	3220		1-25 mg/kg: increased peroxidase activity
1109	estrogen	3220		0.1-25 mg/kg: induction of cell proliferation
1110	estrogen	3220		25 mg/kg: increased LF expression
1111	estrogen	3221		0.5-500 mg/kg: increased relative uterus weight
1112	estrogen	3221		100-500 mg/kg: increased peroxidase activity
1113	estrogen	3221		500 mg/kg: induction of cell proliferation
1114	estrogen	3222		1 g/kg: increased peroxidase activity
1115	suspected no endocrine effect	3222		10 µg - 100 mg: no evidence for estrogenic activity
1116	estrogen	3223		Increased relative uterus weight
1117	estrogen	3223		Increased peroxidase activity
1118	estrogen	3223		Increased LF expression
1119	estrogen	3224		Increased peroxidase activity
1120	estrogen	3225		Induction of cell proliferation
1121	estrogen	3226		Increased LF expression
1122	anti-estrogen	3228		Inhibition of estradiol-mediated transcriptional activity
1123	anti-estrogen	3229		Inhibition of estradiol-mediated transcriptional activity
1124	anti-estrogen	3230		Inhibition of ER DNA-binding activity
1125	anti-estrogen	3231		Inhibition of ER DNA-binding activity
1126	suspected no endocrine effect	3232		No effect on estradiol-mediated transcriptional activity
1127	suspected no endocrine effect	3233		No effect on estradiol-mediated transcriptional activity
1128	suspected no endocrine effect	3234		No effect on estradiol-mediated transcriptional activity
1129	suspected no endocrine effect	3235		No effect on estradiol-mediated transcriptional activity
1130	suspected no endocrine effect	3236		No effect on estradiol-mediated transcriptional activity
1131	suspected no endocrine effect	3237		No effect on estradiol-mediated transcriptional activity
1132	suspected no endocrine effect	3238		No effect on estradiol-mediated transcriptional activity
1133	suspected no endocrine effect	3239		No effect on estradiol-mediated transcriptional activity
1134	suspected no endocrine effect	3240		No effect on estradiol-mediated transcriptional activity
1135	suspected no endocrine effect	3241		No effect on estradiol-mediated transcriptional activity
1136	estrogen	3227		Induction of vitellogenesis
1137	estrogen	3242		Induction of vitellogenesis
1138	estrogen	3243		Induction of vitellogenesis
1139	estrogen	3244		Induction of vitellogenesis
1140	estrogen	3245		Induction of vitellogenesis

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
1141	estrogen	3246		Induction of vitellogenesis
1143	estrogen	3248		Induction of vitellogenesis
1144	estrogen	3249		Inhibition of tritiated 17-beta-estradiol binding to ER
1145	estrogen	3249		Relative binding affinity: 2.2
1146	estrogen	3250		Inhibition of tritiated 17-beta-estradiol binding to ER
1147	estrogen	3250		Relative binding affinity: 5.8
1148	estrogen	3251		Inhibition of tritiated 17-beta-estradiol binding to ER
1149	estrogen	3251		Relative binding affinity: 0.6
1150	estrogen	3252		Inhibition of tritiated 17-beta-estradiol binding to ER
1151	estrogen	3252		Relative binding affinity: 0.00013
1152	estrogen	3253		Inhibition of tritiated 17-beta-estradiol binding to ER
1153	estrogen	3253		Relative binding affinity: 0.00034
1154	estrogen	3254		Inhibition of tritiated 17-beta-estradiol binding to ER
1155	estrogen	3254		Relative binding affinity: 0.00036
1156	estrogen	3255		Inhibition of tritiated 17-beta-estradiol binding to ER
1157	estrogen	3255		Relative binding affinity: 0.000025
1158	estrogen	3256		Inhibition of [3H]17-beta-estradiol binding to ER
1159	estrogen	3256		Relative binding affinity: 0.00012
1160	estrogen	3257		Inhibition of tritiated 17-beta-estradiol binding to ER
1161	estrogen	3257		Relative binding affinity: 0.0029
1162	estrogen	3258		Inhibition of tritiated 17-beta-estradiol binding to ER
1163	estrogen	3258		Relative binding affinity: 0.000091
1164	estrogen	3259		Inhibition of [3H]17-beta-estradiol binding to ER
1165	estrogen	3259		Relative binding affinity: 0.00012
1166	estrogen	3260		Inhibition of tritiated 17-beta-estradiol binding to ER
1167	estrogen	3260		Relative binding affinity: 0.000026
1168	estrogen	3261		Inhibition of tritiated 17-beta-estradiol binding to ER
1169	estrogen	3261		Relative binding affinity: 10
1170	estrogen	3262		Inhibition of tritiated 17-beta-estradiol binding to ER
1171	estrogen	3262		Relative binding affinity: 2857
1172	estrogen	3263		Inhibition of tritiated 17-beta-estradiol binding to ER
1173	estrogen	3263		Relative binding affinity: 0.00017
1174	estrogen	3264		Inhibition of tritiated 17-beta-estradiol binding to ER
1175	estrogen	3264		Relative binding affinity: 0.000013

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
1176	estrogen	3265		Inhibition of tritiated 17-beta-estradiol binding to ER
1177	estrogen	3265		Relative binding affinity: 0.0000047
1178	estrogen	3266		Inhibition of tritiated 17-beta-estradiol binding to ER
1179	estrogen	3266		Relative binding affinity: 0.000011
1180	estrogen	3267		Inhibition of tritiated 17-beta-estradiol binding to ER
1181	estrogen	3267		Relative binding affinity: 0.0000031
1182	estrogen	3268		Inhibition of tritiated 17-beta-estradiol binding to ER
1183	estrogen	3268		Relative binding affinity: 0.0000059
1184	estrogen	3269		Inhibition of tritiated 17-beta-estradiol binding to ER
1185	estrogen	3269		Relative binding affinity: 0.4
1186	estrogen	3270		Inhibition of tritiated 17-beta-estradiol binding to ER
1187	estrogen	3270		Relative binding affinity: 5
1188	estrogen	3271		Induction of ER-mediated gene expression
1189	estrogen	3272		Induction of ER-mediated gene expression
1190	estrogen	3273		Induction of ER-mediated gene expression
1191	estrogen	3274		Induction of ER-mediated gene expression
1192	estrogen	3275		Induction of ER-mediated gene expression
1193	estrogen	3276		Induction of ER-mediated gene expression
1194	estrogen	3277		Induction of ER-mediated gene expression
1195	estrogen	3278		Induction of ER-mediated gene expression
1196	estrogen	3279		Induction of ER-mediated gene expression
1197	estrogen	3280		Induction of ER-mediated gene expression
1198	estrogen	3281		Induction of ER-mediated gene expression
1199	estrogen	3282		Induction of ER-mediated gene expression
1200	estrogen	3283		Induction of ER-mediated gene expression
1201	estrogen	3284		Induction of ER-mediated gene expression
1202	estrogen	3285		Induction of ER-mediated gene expression
1203	estrogen	3286		Induction of ER-mediated gene expression
1204	estrogen	3287		Induction of ER-mediated gene expression
1205	estrogen	3288		Induction of ER-mediated gene expression
1206	estrogen	3289		Induction of ER-mediated gene expression
1207	estrogen	3290		Induction of ER-mediated gene expression
1208	estrogen	3291		Induction of ER-mediated gene expression
1209	estrogen	3292		Induction of ER-mediated gene expression

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
1210	estrogen	3293		Induction of cell proliferation
1211	estrogen	3294		Induction of cell proliferation
1212	estrogen	3295		Induction of cell proliferation
1213	estrogen	3296		Induction of cell proliferation
1214	estrogen	3297		Induction of cell proliferation
1215	estrogen	3298		Induction of cell proliferation
1216	estrogen	3299		Induction of cell proliferation
1217	estrogen	3300		Induction of cell proliferation
1218	estrogen	3301		Induction of cell proliferation
1219	estrogen	3302		Induction of cell proliferation
1220	estrogen	3303		Induction of cell proliferation
1221	estrogen	3304		Induction of cell proliferation
1222	estrogen	3305		Induction of cell proliferation
1223	estrogen	3306		Stimulation of transcriptional activity of ER
1224	estrogen	3307		Stimulation of transcriptional activity of ER
1225	estrogen	3308		Stimulation of transcriptional activity of ER
1226	estrogen	3309		Stimulation of transcriptional activity of ER
1227	estrogen	3310		Stimulation of transcriptional activity of ER
1228	estrogen	3311		Stimulation of transcriptional activity of ER
1229	estrogen	3312		Stimulation of transcriptional activity of ER
1230	estrogen	3313		Stimulation of transcriptional activity of ER
1231	estrogen	3314		Stimulation of transcriptional activity of ER
1232	estrogen	3315		Stimulation of transcriptional activity of ER
1233	estrogen	3316		Stimulation of transcriptional activity of ER
1234	estrogen	3317		Stimulation of transcriptional activity of ER
1235	suspected endocrine effect	3318		Sex reversal female to male
1236	estrogen	3319		Increased uterus weight
1237	estrogen	3320		Increased uterus weight
1238	estrogen	3320		600-800 mg/kg: premature vaginal opening
1239	estrogen	3321		Increased uterus weight
1240	estrogen	3321		Premature vaginal opening
1241	estrogen	3322		Increased uterus weight
1242	estrogen	3322		Premature vaginal opening
1243	estrogen	3323		Increased uterus, vagina and cervix weights

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
1244	estrogen	3323		Increased total uterine luminal fluid
1245	estrogen	3323		Uterine hyperplasia and increased uterine DNA content
1246	estrogen	3324		Increased uterus, vagina and cervix weights
1247	estrogen	3324		Increased total uterine luminal fluid
1248	estrogen	3324		Uterine hyperplasia and increased uterine DNA content
1249	estrogen	3324		Premature vaginal opening
1250	anti-estrogen	3325		Decreased uterus weight
1251	estrogen	3326		Induction of estrogen-mediated transcription
1252	estrogen	3327		Induction of estrogen-mediated transcription
1253	estrogen	3328		Induction of estrogen-mediated transcription
1254	estrogen	3329		Induction of estrogen-mediated transcription
1255	estrogen	3330		Induction of estrogen-mediated transcription
1256	estrogen	3331		Induction of estrogen-mediated transcription
1257	estrogen	3332		Induction of estrogen-mediated transcription
1258	estrogen	3333		Induction of estrogen-mediated transcription
1259	estrogen	3334		Induction of estrogen-mediated transcription
1260	estrogen	3335		Induction of estrogen-mediated transcription
1261	suspected endocrine effect	3336		Decreased sperm density, counts of total, motile and viable sperm and percentage and count of
1262	suspected endocrine effect	3336		Decrease in prostate secretory function
1263	suspected endocrine effect	3336		Abnormal sperm head morphology
1264	suspected endocrine effect	3336		Increased serum testosterone and estradiol
1265	suspected endocrine effect	3337		Abnormal sperm morphology and decreased sperm motility
1266	suspected endocrine effect	3337		Increased serum LH and testosterone levels
1267	suspected endocrine effect	3337		Decreased serum prolactin levels
1268	suspected endocrine effect	3338		Increase in counts of total and viable sperm and percentage and count of motile and progressively
1269	suspected endocrine effect	3338		Increase in prostate secretory function
1270	suspected endocrine effect	3338		Decreased percentage of pathologic sperm
1271	suspected endocrine effect	3339		Decrease in counts of motile and viable sperm
1272	estrogen	3340		80% inhibition of tritiated 19-beta-estradiol binding to ER
1273	estrogen	3341		Inhibition of tritiated 19-beta-estradiol binding to ER
1274	estrogen	3342		Inhibition of tritiated 19-beta-estradiol binding to ER
1275	estrogen	3343		Induction of hER-mediated transcription
1276	estrogen	3344		Induction of hER-mediated transcription
1277	estrogen	3345		Induction of hER-mediated transcription

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
1278	estrogen	3346		Induction of hER-mediated transcription
1279	estrogen	3347		Induction of hER-mediated transcription
1280	estrogen	3348		Induction of hER-mediated transcription
1281	estrogen	3349		Induction of hER-mediated transcription
1282	estrogen	3350		Induction of hER-mediated transcription
1283	estrogen	3351		Induction of hER-mediated transcription
1284	suspected endocrine effect	3352		Decreased plasma free testosterone levels
1285	suspected no endocrine effect	3352		No effect on plasma LH and corticosterone levels
1286	corticosteroid	3353		Competitive inhibition of tritiated dexamethasone binding to GR
1287	corticosteroid	3354		Competitive inhibition of tritiated dexamethasone binding to GR
1288	suspected no endocrine effect	3355		No binding to GR
1289	corticosteroid	3356		Competitive inhibition of GR-mediated gene expression
1290	corticosteroid	3357		Competitive inhibition of GR-mediated gene expression
1291	suspected no endocrine effect	3358		No inhibition of GR-mediated gene expression
1292	corticosteroid	3359		Competitive inhibition of tritiated dexamethasone binding to GR
1293	corticosteroid	3360		Competitive inhibition of tritiated dexamethasone binding to GR
1294	corticosteroid	3361		Competitive inhibition of tritiated dexamethasone binding to GR
1295	corticosteroid	3362		Competitive inhibition of tritiated dexamethasone binding to GR
1296	corticosteroid	3363		Competitive inhibition of tritiated dexamethasone binding to GR
1297	corticosteroid	3364		Competitive inhibition of tritiated dexamethasone binding to GR
1298	corticosteroid	3365		Competitive inhibition of tritiated dexamethasone binding to GR
1299	corticosteroid	3366		Competitive inhibition of tritiated dexamethasone binding to GR
1300	estrogen	3367		Competitive inhibition of tritiated 17-beta-estradiol binding to ER
1301	estrogen	3367		RBA compared to 17-beta-estradiol: 2.15%
1302	estrogen	3368		Competitive inhibition of tritiated 17-beta-estradiol binding to ER
1303	estrogen	3368		RBA compared to 17-beta-estradiol: 0.82%
1304	estrogen	3369		Competitive inhibition of tritiated 17-beta-estradiol binding to ER
1305	estrogen	3369		RBA compared to 17-beta-estradiol: 0.015%
1306	estrogen	3370		Competitive inhibition of tritiated 17-beta-estradiol binding to ER
1307	estrogen	3370		RBA compared to 17-beta-estradiol: 0.00075%
1308	estrogen	3371		Induction of 17-beta-estradiol-regulated gene expression
1309	estrogen	3372		Induction of 17-beta-estradiol-regulated gene expression
1310	estrogen	3373		Induction of 17-beta-estradiol-regulated gene expression
1311	suspected no endocrine effect	3374		No significant induction of 17-beta-estradiol-regulated gene expression

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
1312	molting hormone	3375		Males: delayed molting
1313	reproductive hormone	3375		Males: delayed time until reproduction
1314	suspected endocrine effect	3375		Induction of CYP1A-like protein
1315	suspected no endocrine effect	3375		Females: no effect on molting and time until reproduction
1316	suspected no endocrine effect	3375		No onduction of CYP1A-like protein
1317	suspected no endocrine effect	3375		Females: normal reproduction
1318	suspected no endocrine effect	3387		10 mg/kg: minimal testicular and epididymal degeneration and spermatid retention
1319	suspected endocrine effect	3375		Increased embryo mortality
1320	suspected endocrine effect	3375		Females: elevated Vt levels
1321	estrogen	3376		Proliferation of cells; relative potency to estradiol: 0.0001%
1322	suspected endocrine effect	3377		Negative correlation between placental Cu concentration and birth weight
1323	suspected endocrine effect	3378		Positive correlation between placental Zn concentration and birth weight
1324	suspected endocrine effect	3379		Reduction in PPR
1325	suspected endocrine effect	3379		Overlapping of PPRs of males with those of females
1326	estrogen	3380		Dose dependent sex reversal male to female
1327	estrogen	3380		Additivity: 10 ng in combination with 75, 200 or 750 ng 17-beta-estradiol
1328	estrogen	3380		Additivity: 100 or 250 ng in combination with 75 ng 17-beta-estradiol
1329	estrogen	3380		Additivity: 10 ng in combination with 75 ng 17-beta-estradiol and 10 ng estriol
1330	estrogen	3380		Additivity: 100 ng in combination with 75 ng 17-beta-estradiol and 20 ng estriol
1331	estrogen	3380		Additivity: 250 ng in combination with 75 ng 17-beta-estradiol and 30 ng estriol
1332	estrogen	3381		Dose dependent sex reversal male to female
1333	estrogen	3380		Additivity: 10 ng in combination with 10 ng estriol
1334	estrogen	3381		Additivity: 75 ng in cobination with 10, 100 or 250 ng estrone
1335	estrogen	3381		Additivity: 75 ng in cobination with 10, 20 or 30 ng estriol
1336	estrogen	3381		Additivity: 400 ng in combination with 10 ng estriol
1337	estrogen	3381		Additivity: 200 or 750 ng in combination with 10 ng estrone
1338	estrogen	3381		Additivity: 75 ng in combination with 10 ng estrone and 10 ng estriol or 100 ng estrone and 20 ng
1339	estrogen	3381		Synergy: 200 ng in combination with 10 ng estriol
1340	estrogen	3382		Dose dependent sex reversal male to female
1341	estrogen	3382		Additivity: 10 ng in combination with 75 or 400 ng 17-beta-estradiol
1342	estrogen	3382		Additivity: 20 ng in combination with 75 ng 17-beta-estradiol
1343	estrogen	3382		Additivity: 30 ng in combination with 75 ng 17-beta-estradiol
1344	estrogen	3382		Additivity: 10 ng in combination with 10 or 100 ng estrone
1345	estrogen	3382		Additivity: 10 ng in combination with 10 ng estrone and 75 ng 17-beta-estradiol

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
1346	estrogen	3380		Additivity: 100 ng in combination with 10 ng estriol
1347	estrogen	3380		Synergy: 250 ng in combination with 10 ng estriol
1348	estrogen	3382		Additivity: 20 ng in combination with 100 ng estrone and 75 ng 17-beta-estradiol
1349	estrogen	3382		Additivity: 30 ng in combination with 250 ng estrone and 75 ng 17-beta-estradiol
1350	estrogen	3382		Synergy: 10 ng in combination with 200 ng 17-beta-estradiol or 250 ng estrone
1351	anti-androgen	3383		Induction of 15-alpha-OH and 6-alpha-OH activity
1352	anti-androgen	3383		Increased 6-alpha/15-alpha-OH ratio (demasculinization)
1353	anti-androgen	3384		750 mg/kg: decreased serum testosterone level
1354	anti-androgen	3384		500-750 mg/kg: Increased 6-alpha/15-alpha-OH ratio
1355	catecholamine	2994		Increased NE levels in hypothalamus
1356	catecholamine	2994		Decreased NE levels in median eminence
1357	catecholamine	2995		Decreased NE levels in anterior and mediobasel hypothalamus and median eminence
1359	gonadotropin	3385		0.25-1 mg/kg: decreased serum FSH concentrations
1360	suspected endocrine effect	3386		7.5-10 mg/kg: increased uterine stromal cell proliferation
1362	gonadotropin	3386		Decreased serum LH concentrations
1363	suspected endocrine effect	3387		5-10 mg/kg: decreased serum testosterone concentrations
1364	gonadotropin	3387		5-10 mg/kg: increased serum FSH concentrations
1365	thyroid hormone	3387		2-10 mg/kg: decreased serum T3 concentrations
1366	pituitary hormone	3385		1 mg/kg: increased serum PRL concentrations
1367	pituitary hormone	3386		10 mg/kg: increased serum PRL concentrations
1368	pituitary hormone	3388		0.25-1 mg/kg: increased serum PRL concentrations
1369	suspected endocrine effect	3389		Increased relative weight of prostate and seminal vesicle
1370	suspected endocrine effect	3389		0.75-1 mg/kg: atrophy of Leydig cells
1371	suspected endocrine effect	3389		0.75-1 mg/kg: decreased serum testosteron, estradiol and DHT concentrations
1372	gonadotropin	3389		0.5-1 mg/kg: decreased serum FSH
1373	gonadotropin	3389		Decreased serum LH concentrations
1374	thyroid releasing hormone	3389		0.5-1 mg/kg: decreased serum TSH concentrations
1375	thyroid hormone	3389		Decreased serum T3 and T4 concentrations
1376	estrogen	3390		Calculated log RBA: 1.5
1377	estrogen	3391		Calculated log RBA: 1.47
1378	estrogen	3392		Calculated log RBA: 1.43
1379	estrogen	3393		Calculated log RBA: 1.37
1380	estrogen	3394		Calculated log RBA: 1.29
1381	estrogen	3395		Calculated log RBA: 1.03

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
1382	estrogen	3396		Calculated log RBA: 1.47
1383	estrogen	3397		Calculated log RBA: 1.40
1384	estrogen	3398		Calculated log RBA: 1.21
1385	estrogen	3399		Calculated log RBA: 1.18
1386	estrogen	3400		Calculated log RBA: 1.59
1387	estrogen	3401		Calculated log RBA: 0.72
1388	estrogen	3402		Calculated log RBA: 2.68
1389	estrogen	3403		Calculated log RBA: 2.64
1390	estrogen	3404		Calculated log RBA: 2.61
1391	estrogen	3405		Calculated log RBA: 2.75
1392	estrogen	3406		Calculated log RBA: 1.25
1393	estrogen	3407		Calculated log RBA: 1.07
1394	estrogen	3408		Calculated log RBA: 1.78
1395	estrogen	3409		Calculated log RBA: 2.12
1396	estrogen	3410		Calculated log RBA: 1.12
1397	estrogen	3411		Calculated log RBA: 0.83
1398	estrogen	3412		Calculated log RBA: 2.22
1399	estrogen	3413		Calculated log RBA: 2.64
1400	estrogen	3414		Calculated log RBA: 0.81
1401	estrogen	3415		Calculated log RBA: 1.52
1402	estrogen	3416		Calculated log RBA: 1.47
1403	estrogen	3417		Calculated log RBA: 1.21
1404	estrogen	3418		Calculated log RBA: 1.47
1405	estrogen	3419		Calculated log RBA: 0.97
1406	estrogen	3420		Calculated log RBA: -1.14
1407	estrogen	3421		Calculated log RBA: -0.18
1408	estrogen	3422		Calculated log RBA: -1.91
1409	estrogen	3423		Calculated log RBA: -0.68
1410	estrogen	3424		Predicted log RBA: -1.16
1411	estrogen	3425		Predicted log RBA: -0.52
1412	estrogen	3426		Predicted log RBA: 1.15
1413	estrogen	3427		Predicted log RBA: 1.19
1414	estrogen	3428		Predicted log RBA: 2.00
1415	estrogen	3429		Predicted log RBA: 2.13

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
1416	estrogen	3430		Predicted log RBA: 0.83
1417	estrogen	3431		Predicted log RBA: 1.49
1418	estrogen	3432		Predicted log RBA: -2.19
1419	estrogen	3433		Predicted log RBA: -1.08
1420	estrogen	3434		Predicted log RBA: 1.55
1421	estrogen	3435		Predicted log RBA: 1.35
1422	estrogen	3436		Predicted log RBA: 1.02
1423	estrogen	3437		Predicted log RBA: 1.10
1424	estrogen	3438		Predicted log RBA: 1.07
1425	estrogen	3439		Predicted log RBA: 0.95
1426	estrogen	3440		Predicted log RBA: 1.58
1427	estrogen	3441		Predicted log RBA: 1.29
1428	estrogen	3442		Predicted log RBA: 1.57
1429	estrogen	3443		Predicted log RBA: 1.94
1430	estrogen	3444		Predicted log RBA: 1.20
1431	estrogen	3445		Predicted log RBA: 1.31
1432	estrogen	3446		Predicted log RBA: 1.72
1433	estrogen	3447		Predicted log RBA: 1.33
1434	estrogen	3448		Predicted log RBA: 1.59
1435	estrogen	3449		Predicted log RBA: 0.54
1436	estrogen	3450		Predicted log RBA: 2.30
1437	estrogen	3451		Predicted log RBA: 2.75
1438	estrogen	3452		Predicted log RBA: 1.44
1439	estrogen	3453		Predicted log RBA: 1.06
1440	estrogen	3454		Predicted log RBA: 2.62
1441	estrogen	3455		Predicted log RBA: 2.46
1442	estrogen	3456		Predicted log RBA: 2.42
1443	estrogen	3457		Predicted log RBA: 2.62
1444	estrogen	3458		Predicted log RBA: 2.61
1445	estrogen	3459		Predicted log RBA: 2.28
1446	estrogen	3460		Predicted log RBA: 0.80
1447	estrogen	3461		Predicted log RBA: 0.70
1448	estrogen	3462		Alteration of estrogen-mediated gene expression
1449	estrogen	3463		Alteration of estrogen-mediated gene expression

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
1450	estrogen	3464		Alteration of estrogen-mediated gene expression
1451	estrogen	3465		Alteration of estrogen-mediated gene expression
1452	estrogen	3466		Alteration of estrogen-mediated gene expression
1453	estrogen	3467		Alteration of estrogen-mediated gene expression
1454	estrogen	3468		Alteration of estrogen-mediated gene expression
1455	estrogen	3469		Alteration of estrogen-mediated gene expression
1456	suspected endocrine effect	3470		Decreased testis weight
1457	suspected endocrine effect	3470		Distension of the rete testis and efferent ducts
1458	suspected endocrine effect	3470		Reduction in efferent duct epithelial cell height
1459	suspected endocrine effect	3471		Decreased testis weight
1460	suspected endocrine effect	3471		Distension of the rete testis and efferent ducts
1461	suspected endocrine effect	3471		Reduction in efferent duct epithelial cell height
1462	suspected endocrine effect	3472		Decreased testis weight
1463	suspected endocrine effect	3472		Distension of the rete testis and efferent ducts
1464	suspected endocrine effect	3472		Reduction in efferent duct epithelial cell height
1465	suspected endocrine effect	3473		Reduction in efferent duct epithelial cell height
1466	suspected endocrine effect	3474		Reduction in efferent duct epithelial cell height
1467	suspected endocrine effect	3475		Reduction in efferent duct epithelial cell height
1468	estrogen	3476		Induction of hER dimerization (52.6% of maximal estradiol response)
1469	estrogen	3477		Induction of hER dimerization (101.2% of maximal estradiol response)
1470	estrogen	3478		Induction of hER dimerization (16.3% of maximal estradiol response)
1471	estrogen	3479		Induction of hER-dependent gene transcription (74.3% of maximal estradiol response)
1472	estrogen	3480		Induction of hER-dependent gene transcription (62.4% of maximal estradiol response)
1473	estrogen	3481		Induction of hER-dependent gene transcription (16.6% of maximal estradiol response)
1474	estrogen	3482		Inhibition of tritiated estradiol binding to ER
1475	estrogen	3483		Inhibition of tritiated estradiol binding to ER
1476	suspected no endocrine effect	3484		No displacement of tritiated estradiol from ER
1477	suspected no endocrine effect	3485		No displacement of tritiated estradiol from ER
1478	suspected no endocrine effect	3486		No induction of hER dimerization
1479	suspected no endocrine effect	3487		No induction of hER-dependent gene transcription
1480	thyroid releasing hormone	3488		Increased serum TSH levels
1481	thyroid hormone	3489		Decreased serum free T3 levels
1482	thyroid hormone	3490		Decreased serum free T3 levels
1483	thyroid hormone	3491		Decreased serum free T3 levels

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
1484	thyroid hormone	3492		Decreased serum free T3 levels
1485	thyroid hormone	3493		Decreased serum free T3 levels
1486	thyroid hormone	3494		Decreased serum free T4 levels
1487	thyroid releasing hormone	3494		Increased serum TSH levels
1488	suspected no endocrine effect	3495		No effect on serum thyroid hormone levels
1489	suspected no endocrine effect	3496		No effect on serum thyroid hormone levels
1490	estrogen	3497		Increased vaginal epithelial thickness
1491	estrogen	3497		Increased uterine epithelial cell height
1492	estrogen	3498		Increased vaginal epithelial thickness
1493	estrogen	3498		Increased uterine epithelial cell height
1494	suspected endocrine effect	3499		Inhibition of aromatase activity
1495	suspected endocrine effect	3500		Inhibition of aromatase activity
1496	suspected endocrine effect	3501		Inhibition of aromatase activity
1497	suspected endocrine effect	3502		Inhibition of aromatase activity (LOEC = 2.5 µM)
1498	suspected endocrine effect	3503		Inhibition of aromatase activity
1499	suspected endocrine effect	3504		Inhibition of aromatase activity
1500	suspected endocrine effect	3505		Inhibition of aromatase activity (LOEC = 0.5 µM)
1501	suspected endocrine effect	3506		Inhibition of aromatase activity
1502	suspected no endocrine effect	3507		No inhibition of aromatase activity
1503	suspected no endocrine effect	3508		No inhibition of aromatase activity
1504	suspected no endocrine effect	3509		No inhibition of aromatase activity
1505	suspected no endocrine effect	3510		No inhibition of aromatase activity
1506	suspected no endocrine effect	3511		No inhibition of aromatase activity
1507	suspected no endocrine effect	3512		No inhibition of aromatase activity
1508	suspected no endocrine effect	3513		No inhibition of aromatase activity
1509	suspected no endocrine effect	3514		No inhibition of aromatase activity
1510	suspected no endocrine effect	3515		No inhibition of aromatase activity
1511	suspected no endocrine effect	3516		No inhibition of aromatase activity
1512	suspected no endocrine effect	3517		No inhibition of aromatase activity
1513	suspected no endocrine effect	3518		No inhibition of aromatase activity
1514	suspected no endocrine effect	3519		No inhibition of aromatase activity
1515	suspected no endocrine effect	3520		No inhibition of aromatase activity
1516	suspected no endocrine effect	3521		No effect on serum thyroid hormone levels
1517	suspected endocrine effect	3521		Sex specific (males) increase in thyroid weight and thyroid hyperplasia

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
1518	suspected endocrine effect	3547		Decreased litter size
1519	suspected endocrine effect	3547		F3 males: decreased testis size
1520	gonadotropin	3522		4-32 µg/kg: decreased PMSG-induced ovarian weight gain and inhibition of PMSG-induced ovulation
1521	gonadotropin	3522		20 µg/kg: reduced PMSG-induced serum estradiol levels (12 after PMSG)
1522	gonadotropin	3522		16-32 µg/kg: increased PMSG-induced serum estradiol levels at time of ovulation (72 h after PMSG)
1523	gonadotropin	3522		20 µg/kg: increased serum LH and FSH levels (12h after PMSG)
1524	gonadotropin	3522		32 µg/kg: decreased serum LH levels at time of ovulation (72 h after PMSG)
1525	gonadotropin	3522		8-32 µg/kg: decreased serum FSH levels at time of ovulation (72 h after PMSG)
1526	gonadotropin	3522		16-32 µg/kg: decreased serum progesterone levels at time of ovulation (72 h after PMSG)
1527	gonadotropin	3523		20-150 µg/kg: decreased PMSG-induced ovarian weight gain and inhibition of PMSG-induced
1528	gonadotropin	3523		100 µg/kg: reduced PMSG-induced serum estradiol levels (12 after PMSG)
1529	gonadotropin	3523		18.8-150 µg/kg: increased PMSG-induced serum estradiol levels at time of ovulation (72 h after
1530	gonadotropin	3523		100 µg/kg: increased serum LH and FSH levels (12h after PMSG)
1531	gonadotropin	3523		150 µg/kg: decreased serum LH levels at time of ovulation (72 h after PMSG)
1532	gonadotropin	3523		18.8-150 µg/kg: decreased serum FSH levels at time of ovulation (72 h after PMSG)
1533	gonadotropin	3523		37.5-150 µg/kg: decreased serum progesterone levels at time of ovulation (72 h after PMSG)
1534	gonadotropin	3524		100-720 µg/kg: decreased PMSG-induced ovarian weight gain and inhibition of PMSG-induced
1535	gonadotropin	3524		550 µg/kg: reduced PMSG-induced serum estradiol levels (12 after PMSG)
1536	gonadotropin	3524		550 µg/kg: increased serum LH and FSH levels (12h after PMSG)
1537	gonadotropin	3524		720 µg/kg: decreased serum LH levels at time of ovulation (72 h after PMSG)
1538	gonadotropin	3524		90-720 µg/kg: decreased serum FSH and progesterone levels at time of ovulation (72 h after PMSG)
1539	gonadotropin	3806		Decreased basal serum LH levels
1540	suspected no endocrine effect	3522		No effect on serum PRL levels
1541	suspected no endocrine effect	3523		No effect on serum PRL levels
1542	suspected no endocrine effect	3524		No effect on serum PRL levels
1543	estrogen	3525		Inhibition of fluorescent ligand ES1 binding to ER
1544	estrogen	3525		RBA compared to estradiol: 2.1%
1545	estrogen	3526		Inhibition of fluorescent ligand ES1 binding to ER
1546	estrogen	3526		RBA compared to estradiol: 118%
1547	estrogen	3527		Inhibition of fluorescent ligand ES1 binding to ER
1548	estrogen	3527		RBA compared to estradiol: 3.1%
1549	estrogen	3528		Inhibition of fluorescent ligand ES1 binding to ER
1550	estrogen	3528		RBA compared to estradiol: 0.03-0.09%
1551	estrogen	3529		Inhibition of fluorescent ligand ES1 binding to ER

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
1552	estrogen	3529		RBA compared to estradiol: 0.4%
1553	estrogen	3530		Inhibition of fluorescent ligand ES1 binding to ER
1554	estrogen	3530		RBA compared to estradiol: 0.007-0.02%
1555	estrogen	3531		Inhibition of fluorescent ligand ES1 binding to ER
1556	estrogen	3531		RBA compared to estradiol: 1.7%
1557	estrogen	3532		Inhibition of fluorescent ligand ES1 binding to ER
1558	estrogen	3532		RBA compared to estradiol: 0.2%
1559	estrogen	3533		Inhibition of fluorescent ligand ES1 binding to ER
1560	estrogen	3533		RBA compared to estradiol: 0.003-0.0003%
1561	estrogen	3534		Inhibition of fluorescent ligand ES1 binding to ER
1562	estrogen	3534		RBA compared to estradiol: 0.04%
1563	estrogen	3535		Inhibition of fluorescent ligand ES1 binding to ER
1564	estrogen	3535		RBA compared to estradiol: 0.2%
1565	estrogen	3536		Inhibition of fluorescent ligand ES1 binding to ER
1566	estrogen	3536		RBA compared to estradiol: 0.3%
1567	estrogen	3537		Inhibition of fluorescent ligand ES1 binding to ER
1568	estrogen	3537		RBA compared to estradiol: 0.01-0.02%
1569	corticosteroid	3538		50% decrease in ACTH-induced cortisol secretion
1570	corticosteroid	3538		LC50/EC50 = 64.29
1571	corticosteroid	3539		50% decrease in ACTH-induced cortisol secretion
1572	corticosteroid	3539		LC50/EC50 = 64.22
1574	corticosteroid	3540		50% decrease in ACTH-induced cortisol secretion
1575	corticosteroid	3540		LC50/EC50 = 9.83
1576	corticosteroid	3541		50% decrease in ACTH-induced cortisol secretion
1577	corticosteroid	3541		LC50/EC50 = 8.92
1578	corticosteroid	3542		50% decrease in ACTH-induced cortisol secretion
1579	corticosteroid	3542		LC50/EC50 = 2.96
1580	corticosteroid	3543		Decreased individual basal plasma corticosterone concentrations
1581	corticosteroid	3543		Decreased activity of intermediary metabolic enzymes, PEPCK and ME
1582	corticosteroid	3544		Decreased individual basal plasma corticosterone concentrations
1583	corticosteroid	3545		Decreased individual basal plasma corticosterone concentrations
1584	estrogen	3546		8-24 h: decreased 17-beta-estradiol secretion
1585	estrogen	3546		36-48 h: increased 17-beta-estradiol secretion (3.1 µM)
1586	estrogen	3546		Dose-dependent increase in apoptosis

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
1587	thyroid hormone	3547		F2 males: decreased serum T4 levels
1588	suspected no endocrine effect	3547		No effect on serum cortisol, testosterone and estradiol levels
1589	thyroid hormone	3548		F2 males: decreased serum T4 levels
1590	suspected no endocrine effect	3548		No effect on serum cortisol, testosterone and estradiol levels
1591	thyroid hormone	3549		F2 and F3 males: decreased serum T4 levels
1592	thyroid hormone	3549		F3 females: decreased serum T4 levels
1593	suspected no endocrine effect	3549		No effect on serum cortisol, testosterone and estradiol levels
1594	estrogen	3550		Induction of proliferation (full agonist)
1595	estrogen	3550		Relative potency to 17-beta-estradiol: 0.001%
1596	estrogen	3551		Induction of proliferation (full agonist)
1597	estrogen	3551		Relative potency to 17-beta-estradiol: 0.01%
1598	estrogen	3552		Induction of proliferation (full agonist)
1599	estrogen	3552		Relative potency to 17-beta-estradiol: 0.001%
1600	estrogen	3553		Induction of proliferation (partial agonist)
1601	estrogen	3553		Relative potency to 17-beta-estradiol: 0.001%
1602	estrogen	3554		Induction of proliferation (partial agonist)
1603	estrogen	3554		Relative potency to 17-beta-estradiol: 0.0001%
1604	estrogen	3555		Induction of proliferation (partial agonist)
1605	estrogen	3555		Relative potency to 17-beta-estradiol: 0.0001%
1606	estrogen	3556		Induction of proliferation (full agonist)
1607	estrogen	3556		Relative potency to 17-beta-estradiol: 0.001%
1608	estrogen	3557		Induction of proliferation (full agonist)
1609	estrogen	3557		Relative potency to 17-beta-estradiol: 0.01%
1610	estrogen	3558		Induction of proliferation (full agonist)
1611	estrogen	3558		Relative potency to 17-beta-estradiol: 0.01%
1612	estrogen	3559		Induction of proliferation (full agonist)
1613	estrogen	3559		Relative potency to 17-beta-estradiol: 0.1%
1614	estrogen	3560		Induction of proliferation (full agonist)
1615	estrogen	3560		Relative potency to 17-beta-estradiol: 1%
1616	estrogen	3561		Induction of proliferation (full agonist)
1617	estrogen	3561		Relative potency to 17-beta-estradiol: 0.01%
1618	estrogen	3562		Induction of proliferation (full agonist)
1619	estrogen	3562		Relative potency to 17-beta-estradiol: 0.01%
1620	estrogen	3563		Induction of proliferation (full agonist)

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
1621	estrogen	3563		Relative potency to 17-beta-estradiol: 0.0001%
1622	estrogen	3564		Induction of proliferation (full agonist)
1623	estrogen	3564		Relative potency to 17-beta-estradiol: 0.0001%
1624	estrogen	3565		Increased PR concentration
1625	estrogen	3566		Increased PR concentration
1626	estrogen	3567		Increased PR concentration
1627	estrogen	3568		Increased PR concentration
1628	estrogen	3569		Increased PR concentration
1629	estrogen	3570		Increased PR concentration
1630	estrogen	3571		Increased PR concentration
1631	estrogen	3572		Increased PR concentration
1632	estrogen	3573		Increased PR concentration
1633	estrogen	3574		Increased PR concentration
1634	estrogen	3575		Increased PR concentration
1635	estrogen	3576		Increased PR concentration
1636	estrogen	3577		Induction of 17-beta-estradiol-mediated gene expression
1637	estrogen	3577		Relative potency to 17-beta-estradiol: 0.01%
1638	estrogen	3578		Induction of 17-beta-estradiol-mediated gene expression
1639	estrogen	3578		Relative potency to 17-beta-estradiol: 0.1%
1640	estrogen	3579		Induction of 17-beta-estradiol-mediated gene expression
1641	estrogen	3579		Relative potency to 17-beta-estradiol: 0.01%
1642	estrogen	3580		Induction of 17-beta-estradiol-mediated gene expression
1643	estrogen	3580		Relative potency to 17-beta-estradiol: 0.01%
1644	estrogen	3581		Induction of 17-beta-estradiol-mediated gene expression
1645	estrogen	3581		Relative potency to 17-beta-estradiol: < 0.01%
1646	estrogen	3582		Induction of 17-beta-estradiol-mediated gene expression
1647	estrogen	3582		Relative potency to 17-beta-estradiol: 0.01%
1648	estrogen	3583		Induction of 17-beta-estradiol-mediated gene expression
1649	estrogen	3583		Relative potency to 17-beta-estradiol: 0.01%
1650	estrogen	3584		Induction of 17-beta-estradiol-mediated gene expression
1651	estrogen	3584		Relative potency to 17-beta-estradiol: 0.1%
1652	estrogen	3585		Induction of 17-beta-estradiol-mediated gene expression
1653	estrogen	3585		Relative potency to 17-beta-estradiol: 0.1%
1654	estrogen	3586		Induction of 17-beta-estradiol-mediated gene expression

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
1655	estrogen	3586		Relative potency to 17-beta-estradiol: 1%
1656	estrogen	3587		Induction of 17-beta-estradiol-mediated gene expression
1657	estrogen	3587		Relative potency to 17-beta-estradiol: 0.1%
1658	estrogen	3588		Induction of 17-beta-estradiol-mediated gene expression
1659	estrogen	3588		Relative potency to 17-beta-estradiol: 0.1%
1660	estrogen	3589		Induction of 17-beta-estradiol-mediated gene expression
1661	estrogen	3589		Relative potency to 17-beta-estradiol: < 0.01%
1662	estrogen	3590		Induction of 17-beta-estradiol-mediated gene expression
1663	estrogen	3590		Relative potency to 17-beta-estradiol: < 0.01%
1664	estrogen	3591		RBA compared to 17-beta-estradiol: 0.15%
1665	estrogen	3592		RBA compared to 17-beta-estradiol: 0.056%
1666	estrogen	3593		RBA compared to 17-beta-estradiol: 0.0015%
1667	estrogen	3594		RBA compared to 17-beta-estradiol: 0.023%
1668	estrogen	3595		RBA compared to 17-beta-estradiol: 0.0005%
1669	estrogen	3596		RBA compared to 17-beta-estradiol: 0.0009%
1670	estrogen	3597		RBA compared to 17-beta-estradiol: 0.15%
1671	estrogen	3598		RBA compared to 17-beta-estradiol: 0.15%
1672	estrogen	3599		RBA compared to 17-beta-estradiol: 0.18%
1673	estrogen	3600		RBA compared to 17-beta-estradiol: 0.15%
1674	estrogen	3601		RBA compared to 17-beta-estradiol: 0.25%
1675	estrogen	3602		RBA compared to 17-beta-estradiol: 1%
1676	estrogen	3603		RBA compared to 17-beta-estradiol: 0.013%
1677	estrogen	3604		RBA compared to 17-beta-estradiol: 0.0075%
1678	suspected no endocrine effect	3605		No induction of cell proliferation
1679	suspected no endocrine effect	3606		No induction of cell proliferation
1680	suspected no endocrine effect	3607		No induction of cell proliferation
1681	suspected no endocrine effect	3608		No induction of PR
1682	suspected no endocrine effect	3609		No induction of PR
1683	suspected no endocrine effect	3610		No induction of PR
1684	suspected no endocrine effect	3611		No induction of PR
1685	suspected no endocrine effect	3612		No induction of 17-beta-estradiol-mediated gene expression
1686	suspected no endocrine effect	3613		No induction of 17-beta-estradiol-mediated gene expression
1687	suspected no endocrine effect	3614		No induction of 17-beta-estradiol-mediated gene expression
1688	suspected no endocrine effect	3615		No induction of 17-beta-estradiol-mediated gene expression

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
1689	suspected no endocrine effect	3616		No actvity
1690	suspected no endocrine effect	3617		No actvity
1691	suspected no endocrine effect	3618		No actvity
1692	suspected no endocrine effect	3619		No actvity
1693	estrogen	3620		Induction of hER-mediated transcription
1694	estrogen	3620		Relative potency to 17-beta-estradiol: 0.2
1695	estrogen	3621		Induction of hER-mediated transcription
1696	estrogen	3621		Relative potency to 17-beta-estradiol: 0.0001
1697	estrogen	3622		Induction of hER-mediated transcription
1698	estrogen	3622		Relative potency to 17-beta-estradiol: 0.0001
1699	estrogen	3623		Induction of hER-mediated transcription
1700	estrogen	3623		Relative potency to 17-beta-estradiol: 0.00001
1701	estrogen	3624		Induction of hER-mediated transcription
1702	estrogen	3624		Relative potency to 17-beta-estradiol: 0.00001
1703	estrogen	3625		Induction of hER-mediated transcription
1704	estrogen	3625		Relative potency to 17-beta-estradiol: 0.00001-0.000001
1705	androgen	3626		Induction of hAR-mediated transcription
1706	androgen	3626		Relative potency compared to DHT: 0.0008
1707	androgen	3627		Induction of hAR-mediated transcription
1708	androgen	3628		Induction of hAR-mediated transcription
1709	androgen	3629		Induction of hAR-mediated transcription
1710	anti-estrogen	3630		Inhibition of 17-beta-estradiol activity (dose-dependent)
1711	anti-androgen	3631		Inhibition of DHT activity (dose-dependent)
1712	anti-androgen	3632		Inhibition of DHT activity (dose-dependent)
1713	anti-androgen	3633		Inhibition of DHT activity (dose-dependent)
1714	anti-androgen	3634		Inhibition of DHT activity (dose-dependent)
1715	anti-androgen	3635		Inhibition of DHT activity (dose-dependent)
1716	progestogen	3636		Inhibition of progesterone-induced oocyte maturation
1717	suspected no endocrine effect	3637		No inhibition of progesterone-induced oocyte maturation
1718	suspected no endocrine effect	3638		No inhibition of progesterone-induced oocyte maturation
1719	suspected no endocrine effect	3639		No inhibition of progesterone-induced oocyte maturation
1720	suspected no endocrine effect	3640		No inhibition of progesterone-induced oocyte maturation
1721	suspected no endocrine effect	3641		No inhibition of progesterone-induced oocyte maturation
1722	thyroid hormone	3642		Competitive displacement of tritiated T3 from TR

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
1723	thyroid hormone	3642		Potency compared to T3: 0.0001
1724	thyroid hormone	3643		Competitive displacement of tritiated T3 from TR
1725	thyroid hormone	3643		Potency compared to T3: 0.0001
1726	thyroid hormone	3644		Competitive displacement of tritiated T3 from TR
1727	thyroid hormone	3644		Potency compared to T3: 0.0001
1728	thyroid hormone	3645		Competitive displacement of tritiated T3 from TR
1729	thyroid hormone	3645		Potency compared to T3: 0.0001
1730	thyroid hormone	3646		Competitive displacement of tritiated T3 from TR
1731	thyroid hormone	3646		Potency compared to T3: 0.0001
1732	thyroid hormone	3647		Competitive displacement of tritiated T3 from TR
1733	thyroid hormone	3647		Potency compared to T3: 0.0001
1734	thyroid hormone	3648		Competitive displacement of tritiated T3 from TR
1735	thyroid hormone	3648		Potency compared to T3: 0.0001
1736	suspected no endocrine effect	3649		No affinity for TRbeta
1737	suspected no endocrine effect	3650		No affinity for TRbeta
1738	suspected no endocrine effect	3651		No affinity for TRbeta
1739	suspected no endocrine effect	3652		No affinity for TRbeta
1740	suspected no endocrine effect	3653		No affinity for TRbeta
1741	suspected no endocrine effect	3654		No affinity for TRbeta
1742	thyroid hormone	3655		Very low affinity for TRbeta
1743	thyroid hormone	3655		100 µM: 20% displacement of tritiated T3 from TR
1744	thyroid hormone	3656		Very low affinity for TRbeta
1745	thyroid hormone	3656		100 µM: 20% displacement of tritiated T3 from TR
1746	thyroid hormone	3657		Very low affinity for TRbeta
1747	thyroid hormone	3657		100 µM: 20% displacement of tritiated T3 from TR
1748	thyroid hormone	3658		Very low affinity for TRbeta
1749	thyroid hormone	3658		100 µM: 20% displacement of tritiated T3 from TR
1750	suspected no endocrine effect	3659		No affinity for transthyretin
1751	thyroid hormone	3660		Affinity for transthyretin similar to T4
1752	thyroid hormone	3661		Affinity for transthyretin similar to T4
1753	thyroid hormone	3662		Affinity for transthyretin similar to T4
1754	thyroid hormone	3663		Affinity for transthyretin similar to T4
1755	thyroid hormone	3664		Affinity for transthyretin similar to T4
1756	thyroid hormone	3665		Affinity for transthyretin similar to T4

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
1757	suspected no endocrine effect	3666		No affinity for transthyretin
1758	suspected no endocrine effect	3667		No affinity for transthyretin
1759	suspected no endocrine effect	3668		No affinity for transthyretin
1760	suspected no endocrine effect	3669		No affinity for transthyretin
1761	suspected no endocrine effect	3670		No affinity for transthyretin
1762	suspected no endocrine effect	3671		No affinity for transthyretin
1763	suspected no endocrine effect	3672		No affinity for transthyretin
1764	suspected no endocrine effect	3673		No affinity for transthyretin
1765	thyroid hormone	3674		Weak affinity for transthyretin
1766	thyroid hormone	3675		Weak affinity for transthyretin
1767	thyroid hormone	3674		Potency compared to T4: 0.001
1768	thyroid hormone	3675		Potency compared to T4: 0.001
1769	thyroid hormone	3676		Affinity for thyroid-binding globulin compared to T4: 0.01-0.033
1770	thyroid hormone	3677		Affinity for thyroid-binding globulin compared to T4: 0.01-0.033
1771	thyroid hormone	3678		Affinity for thyroid-binding globulin compared to T4: 0.014-0.00125
1772	thyroid hormone	3679		Affinity for thyroid-binding globulin compared to T4: 0.014-0.00125
1773	suspected no endocrine effect	3680		No affinity for thyroid-binding globulin
1774	suspected no endocrine effect	3681		No affinity for thyroid-binding globulin
1775	suspected no endocrine effect	3682		No affinity for thyroid-binding globulin
1776	suspected no endocrine effect	3683		No affinity for thyroid-binding globulin
1777	suspected no endocrine effect	3684		No affinity for thyroid-binding globulin
1778	suspected no endocrine effect	3685		No affinity for thyroid-binding globulin
1779	suspected no endocrine effect	3686		No affinity for thyroid-binding globulin
1780	suspected no endocrine effect	3687		No affinity for thyroid-binding globulin
1781	suspected no endocrine effect	3688		No affinity for thyroid-binding globulin
1782	suspected no endocrine effect	3689		No affinity for thyroid-binding globulin
1783	suspected no endocrine effect	3690		No affinity for thyroid-binding globulin
1784	suspected no endocrine effect	3691		No affinity for thyroid-binding globulin
1785	suspected no endocrine effect	3692		No affinity for thyroid-binding globulin
1786	estrogen	3693		35% sex reversal male to female
1787	estrogen	3694		37% sex reversal male to female
1788	estrogen	3695		38% sex reversal male to female
1789	estrogen	3695		Increased sex reversal in combination with estradiol (89%)
1790	estrogen	3696		41% sex reversal male to female

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
1791	estrogen	3697		71% sex reversal male to female
1792	suspected no endocrine effect	3698		No sex reversal male to female
1793	suspected no endocrine effect	3699		No sex reversal male to female
1794	suspected no endocrine effect	3700		No sex reversal male to female
1795	estrogen	3701		64% sex reversal male to female
1796	estrogen	3702		Inhibition of tritiated 17-beta-estradiol binding to ER
1797	estrogen	3702		Potency relative to 17-beta-estradiol: 0.0001
1798	estrogen	3703		Inhibition of tritiated 17-beta-estradiol binding to ER
1799	estrogen	3703		Potency relative to 17-beta-estradiol: 0.00001
1800	estrogen	3704		Weak affinity for ER
1801	estrogen	3705		Weak affinity for ER
1802	estrogen	3706		Induction of cell proliferation
1803	estrogen	3707		Induction of cell proliferation
1804	estrogen	3708		Induction of cell proliferation
1805	estrogen	3709		Weak induction of cell proliferation
1806	suspected no endocrine effect	3710		No induction of cell proliferation
1807	estrogen	3711		Induction of estrogen-dependent transcription
1808	estrogen	3712		Induction of estrogen-dependent transcription
1809	estrogen	3713		Induction of estrogen-dependent transcription
1810	estrogen	3714		Induction of estrogen-dependent transcription
1811	suspected no endocrine effect	3715		No induction of estrogen-dependent transcription
1812	estrogen	3716		Dose dependent tumor development
1813	estrogen	3717		Sex reversal male to female
1814	suspected endocrine effect	3717		Males: decreased plasma testosterone levels
1815	estrogen	3718		Sex reversal male to female
1816	suspected endocrine effect	3718		Males: decreased plasma testosterone levels
1817	suspected endocrine effect	3718		Females: decreased plasma testosterone, 5-alpha-DHT and progesterone levels
1818	estrogen	3719		Sex reversal male to female
1819	estrogen	3720		Induction of ERalpha-mediated transcription
1820	estrogen	3720		1-100 nM in combination with 10 nM 17-beta-estradiol: agonist
1821	estrogen	3720		1 µM in combination with 10 nM 17-beta-estradiol: antagonist
1822	estrogen	3721		Induction of ERalpha-mediated transcription
1823	estrogen	3721		Combination with 10 nM 17-beta-estradiol: agonist
1824	estrogen	3722		Days 5-8: up-regulation of ERalpha in uterine epithelial cells

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
1825	estrogen	3722		Days 5-8: down-regulation of ERalpha in uterine stromal cells
1826	estrogen	3722		Days 5-8: overexpression of estrogen-regulated genes (c-fos protein, LF)
1827	estrogen	3722		Days 5-15: increased expression of estrogen regulated p21
1828	steroid	3724		Induction of PXR-mediated transcription
1829	estrogen	3725		Induction of ERalpha-mediated transcription
1830	estrogen	3726		Induction of ERalpha-mediated transcription
1831	estrogen	3727		Induction of ERalpha-mediated transcription
1832	suspected no endocrine effect	3728		No induction of PXR-mediated transcription
1833	suspected no endocrine effect	3729		No induction of PXR-mediated transcription
1834	steroid	3730		Induction of PXR-mediated transcription
1835	steroid	3731		Induction of PXR-mediated transcription
1836	suspected no endocrine effect	3732		No induction of PXR-mediated transcription
1837	suspected no endocrine effect	3733		No induction of PXR-mediated transcription
1838	suspected endocrine effect	3734		Increased CYP3A1 mRNA expression
1839	suspected endocrine effect	3735		Increased CYP3A1 mRNA expression
1840	suspected endocrine effect	3736		Increased CYP3A1 mRNA expression
1841	suspected endocrine effect	3737		Testicular atrophy and aspermatogenesis
1842	suspected endocrine effect	3737		Decreased relative testes weight
1843	estrogen	3738		Early surge in reproductive tract growth (peak at day 5)
1844	estrogen	3738		Enhanced reproductive tract development
1845	estrogen	3738		Uterine endometrial epithelial cell hypertrophy and hyperplasia
1846	estrogen	3738		Chronic endometrial induction of lactoferrin
1847	suspected endocrine effect	3739		Increased sex ratio males:females
1848	suspected endocrine effect	3740		Tendency to increased sex ratio males:females (not statistically significant)
1849	suspected no endocrine effect	3741		No effect on sex ratio or gonadal histology
1850	suspected no endocrine effect	3742		No effect on sex ratio or gonadal histology
1851	suspected no endocrine effect	3741		No effect on in vitro gonadal steroid production
1852	suspected no endocrine effect	3742		No effect on in vitro gonadal steroid production
1853	suspected no endocrine effect	3743		No effect on sex ratio or gonadal histology
1854	suspected no endocrine effect	3743		No effect on in vitro gonadal steroid production
1855	suspected no endocrine effect	3744		No effect on spawning
1856	suspected no endocrine effect	3745		No effect on spawning
1857	suspected no endocrine effect	3744		No effect on gonad histology
1858	suspected no endocrine effect	3745		No effect on gonad histology

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
1859	suspected no endocrine effect	3746		No effect on spawning
1860	suspected no endocrine effect	3746		No effect on gonad histology
1861	suspected no endocrine effect	3747		No effect on sex ratio
1862	suspected no endocrine effect	3747		No effect on in vitro gonadal steroid production
1863	suspected no endocrine effect	3748		No effect on ER binding activity
1864	estrogen	3749		Increased ER binding activity
1865	progestogen	3750		Time- and dose-dependent decrease in progesterone secretion
1866	androgen	3751		Correlation between the incidence of imposex and TBT-contamination
1867	androgen	3752		Correlation between the incidence of intersex and TBT-contamination
1868	androgen	3753		Correlation between the incidence of intersex and TBT-contamination
1869	androgen	3754		Correlation between the incidence of imposex and TBT-contamination
1870	androgen	3755		Correlation between shell thickness and TBT-contamination
1871	progestogen	3756		Dose-dependent inhibition of tritiated progesterone binding to PR
1872	progestogen	3757		Dose-dependent inhibition of tritiated progesterone binding to PR
1873	progestogen	3758		Dose-dependent inhibition of tritiated progesterone binding to PR
1874	progestogen	3759		Dose-dependent inhibition of [3H]progesterone binding to PR
1875	progestogen	3760		Dose-dependent inhibition of tritiated progesterone binding to PR
1876	progestogen	3761		Dose-dependent inhibition of tritiated progesterone binding to PR
1877	progestogen	3762		Dose-dependent inhibition of tritiated progesterone binding to PR
1878	progestogen	3763		Dose-dependent inhibition of [3H]progesterone binding to PR
1879	progestogen	3764		Dose-dependent inhibition of tritiated progesterone binding to PR
1880	progestogen	3765		Dose-dependent inhibition of tritiated progesterone binding to PR
1881	progestogen	3766		Dose-dependent inhibition of tritiated progesterone binding to PR
1882	progestogen	3767		Dose-dependent inhibition of [3H]progesterone binding to PR
1883	progestogen	3768		Dose-dependent inhibition of tritiated progesterone binding to PR
1884	progestogen	3769		Dose-dependent inhibition of tritiated progesterone binding to PR
1885	androgen	3770		Both sexes: cell proliferation and hypertrohy of müllerian duct epithelium
1886	androgen	3770		Both sexes: cell proliferation and hypertrohy of Wolffian duct epithelium
1887	androgen	3864		32% increase in testosterone titres
1888	estrogen	3771		Both sexes: cell proliferation and hypertrohy of müllerian duct epithelium
1889	suspected no endocrine effect	3771		No effect on wolffian ducts
1890	anti-estrogen	3772		Females: decreased müllerian duct epithelial area
1891	anti-estrogen	3772		Females: inhibition of 17-beta-estradiol action
1892	suspected no endocrine effect	3772		Males: no significant effect on müllerian duct

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
1893	suspected no endocrine effect	3772		Both sexes: no effect on wolffian ducts
1894	estrogen	3773		Females: increased müllerian duct epithelial area
1895	suspected no endocrine effect	3772		Males: no significant effect on müllerian duct
1896	suspected no endocrine effect	3772		Both sexes: no effect on wolffian ducts
1897	estrogen	3774		Both sexes: induction of vitellogenesis
1898	estrogen	3775		Induction of vitellogenesis
1899	estrogen	3776		Induction of vitellogenesis
1900	thyroid releasing hormone	3777		Increased serum TSH levels
1901	suspected no endocrine effect	3777		No effect on serum T4 levels
1902	suspected no endocrine effect	3777		Increase in sister chromatid exchange and chromosome translocations
1903	suspected endocrine effect	3778		Decreased ovary, pituitary and uterine weight
1904	suspected endocrine effect	3778		Decreased number of uterine glands
1905	suspected endocrine effect	3778		Decreased DNA synthesis in uterine glandular and luminal epithelial cells
1906	suspected endocrine effect	3778		Decreased number of epithelial layers in the cervix and vagina
1907	suspected endocrine effect	3779		Decreased ovary, pituitary and uterine weight
1908	suspected endocrine effect	3779		Increased length of the estrous cycle
1909	suspected endocrine effect	3779		Decreased number of uterine glands
1910	suspected endocrine effect	3779		Decreased DNA synthesis in uterine glandular and luminal epithelial cells
1911	suspected endocrine effect	3779		Decreased number of epithelial layers in the cervix and vagina
1912	suspected endocrine effect	3780		Decreased DNA synthesis in uterine glandular and luminal epithelial cells
1913	suspected endocrine effect	3780		Decreased number of epithelial layers in the cervix and vagina
1914	suspected endocrine effect	3781		Decreased DNA synthesis in uterine glandular and luminal epithelial cells
1915	suspected endocrine effect	3781		Decreased DNA synthesis in cervical and vaginal epithelium
1916	suspected endocrine effect	3781		Decreased number of epithelial layers in the cervix and vagina
1917	anti-androgen	3782		Inhibition of DHT-induced activity (partial antagonist)
1918	anti-androgen	3783		Inhibition of DHT-induced activity (full antagonist)
1919	anti-androgen	3784		Inhibition of DHT-induced activity (antagonist)
1920	anti-androgen	3785		Inhibition of DHT-induced activity (antagonist)
1921	anti-androgen	3786		Inhibition of DHT-induced activity (antagonist)
1922	anti-androgen	3787		Inhibition of DHT-induced activity (antagonist)
1923	anti-androgen	3788		Inhibition of DHT-induced activity (antagonist)
1924	anti-androgen	3789		Inhibition of DHT-induced activity (antagonist)
1925	anti-androgen	3790		Inhibition of DHT-induced activity (antagonist)
1926	anti-androgen	3791		Inhibition of DHT-induced activity (antagonist)

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
1927	estrogen	3792		Activation of ERalpha
1928	estrogen	3792		Potency compared to 17-beta-estradiol: 0.038
1929	estrogen	3793		Activation of ERalpha
1930	estrogen	3794		Increased peroxidase activity (estrogen-responsive)
1931	estrogen	3795		Increased PR levels (estrogen-responsive)
1932	estrogen	3807		Increased serum estradiol levels
1933	suspected endocrine effect	3796		High level of intersex, especially the female form
1934	suspected endocrine effect	3797		High level of intersex, especially the female form
1935	suspected endocrine effect	3798		Increased incidence of intersex, especially the female form
1936	suspected no endocrine effect	3799		No significant effect on reproduction and sex ratio
1937	suspected no endocrine effect	3800		No significant effect on reproduction and sex ratio
1938	suspected no endocrine effect	3801		No significant effect on reproduction and sex ratio
1939	suspected no endocrine effect	3799		No effect on development
1940	suspected no endocrine effect	3800		No effect on development
1941	suspected no endocrine effect	3801		No effect on development
1942	suspected no endocrine effect	3802		125-500 µg/l: acute lethal
1943	suspected no endocrine effect	3802		62 µg/l: collaps of population
1944	suspected no endocrine effect	3802		31 µg/l: no significant effect on sex ratio and population growth rate
1946	suspected endocrine effect	3803		Increased fertility of females
1947	suspected endocrine effect	3803		50-100 µg/l: longer 2nd antennae of males
1948	suspected no endocrine effect	3803		No effect on sex ratio
1949	suspected no endocrine effect	3803		Reduced survival and growth
1950	thyroid hormone	3804		Increased serum T4 levels
1951	thyroid hormone	3805		Decreased serum T4 levels
1952	corticosteroid	3805		Increased serum cortisol levels
1953	thyroid hormone	3806		Decreased serum T4 levels
1954	insulin	3806		Increased serum insulin levels
1955	thyroid hormone	3807		Decreased serum T4 levels
1956	insulin	3807		Increased serum insulin levels
1957	gonadotropin	3807		Decreased basal serum LH levels
1958	thyroid hormone	3808		Decreased serum T4 levels
1959	insulin	3808		Increased serum insulin levels
1960	gonadotropin	3808		Increased basal serum LH levels
1961	suspected endocrine effect	3808		Increased severity of oviductal intraepithelial cysts

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
1962	corticosteroid	3809		Increased serum cortisol levels
1963	insulin	3809		Increased serum insulin levels
1964	estrogen	3809		Increased serum estradiol levels
1965	gonadotropin	3809		Decreased mean serum LH levels
1966	gonadotropin	3809		Decreased basal serum LH levels
1967	thyroid hormone	3810		Decreased serum T4 levels
1968	thyroid hormone	3811		Decreased serum T4 levels
1969	insulin	3810		Increased serum insulin levels
1970	suspected endocrine effect	3811		Increased severity of oviductal intraepithelial cysts
1971	suspected no endocrine effect	3812		0.693 µg/l: 60% inhibition of cyprid settlement
1972	suspected no endocrine effect	3812		7.127 µg/l: 88% hibition of cyprid settlement
1973	suspected no endocrine effect	3813		0.693 µg/l: 90% inhibition of cyprid settlement
1974	suspected no endocrine effect	3813		7.127 µg/l: acute lethal
1975	suspected no endocrine effect	3814		0.059 µg/l: 50% inhibition of cyprid settlement
1976	suspected no endocrine effect	3814		0.693 µg/l: 87% inhibition of cyprid settlement
1977	suspected no endocrine effect	3814		7.127 µg/l: acute lethal
1978	suspected no endocrine effect	3815		Inhibition of cyprid settlement
1979	suspected no endocrine effect	3816		0.693 µg/l: reversible inhibition of cyprid settlement
1980	suspected no endocrine effect	3816		7.127 µg/l: irreversible inhibition of cyprid settlement
1981	suspected no endocrine effect	3817		0.1 µg/l: reversible inhibition of cyprid settlement
1982	suspected no endocrine effect	3817		1 µg/l: irreversible inhibition of cyprid settlement
1983	suspected endocrine effect	3818		1 µg/l: 100% increase in CMP levels
1984	suspected endocrine effect	3818		0.01-0.1 µg/l: 50% increase in CMP levels
1985	suspected endocrine effect	3819		100% increase in CMP levels
1986	corticosteroid	3820		Competitive inhibition of CYP11B1-dependent corticosterone synthesis
1987	corticosteroid	3821		Competitive inhibition of CYP11B1-dependent corticosterone synthesis
1988	corticosteroid	3822		Competitive inhibition of CYP11B1-dependent corticosterone synthesis
1989	corticosteroid	3822		Ki = 1.6 µM
1990	corticosteroid	3823		Induction of CYP11B1-dependent corticosterone synthesis
1991	corticosteroid	3824		Induction of CYP11B1-dependent corticosterone synthesis
1992	suspected no endocrine effect	3825		No significant induction of CYP11B1-dependent corticosterone synthesis
1993	suspected no endocrine effect	3826		No significant induction of CYP11B1-dependent corticosterone synthesis
1994	suspected no endocrine effect	3827		No significant induction of CYP11B1-dependent corticosterone synthesis
1995	suspected no endocrine effect	3828		No significant induction of CYP11B1-dependent corticosterone synthesis

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
1996	suspected no endocrine effect	3829		No significant induction of CYP11B1-dependent corticosterone synthesis
1997	suspected no endocrine effect	3830		No significant inhibition of CYP11B1-dependent corticosterone synthesis
1998	suspected no endocrine effect	3831		No effect on CYP11B1-dependent corticosterone synthesis
1999	suspected no endocrine effect	3832		No significant induction of CYP11B1-dependent corticosterone synthesis
2000	suspected no endocrine effect	3833		No significant induction of CYP11B1-dependent corticosterone synthesis
2001	suspected no endocrine effect	3834		No effect on CYP11B1-dependent corticosterone synthesis
2002	suspected no endocrine effect	3835		No significant inhibition of CYP11B1-dependent corticosterone synthesis
2003	suspected no endocrine effect	3836		No significant induction of CYP11B1-dependent corticosterone synthesis
2004	suspected no endocrine effect	3837		No effect on CYP11B1-dependent corticosterone synthesis
2005	suspected no endocrine effect	3838		No significant induction of CYP11B1-dependent corticosterone synthesis
2006	suspected no endocrine effect	3839		No significant induction of CYP11B1-dependent corticosterone synthesis
2007	suspected no endocrine effect	3840		No significant inhibition of CYP11B1-dependent corticosterone synthesis
2008	suspected no endocrine effect	3841		No effect on CYP11B1-dependent corticosterone synthesis
2009	suspected no endocrine effect	3842		No effect on CYP11B1-dependent corticosterone synthesis
2010	suspected no endocrine effect	3843		No effect on CYP11B1-dependent corticosterone synthesis
2011	suspected no endocrine effect	3844		No effect on CYP11B1-dependent corticosterone synthesis
2012	suspected no endocrine effect	3845		No effect on CYP11B1-dependent corticosterone synthesis
2013	suspected no endocrine effect	3846		No significant induction of CYP11B1-dependent corticosterone synthesis
2014	suspected no endocrine effect	3847		No effect on CYP11B1-dependent corticosterone synthesis
2015	suspected no endocrine effect	3848		No significant induction of CYP11B1-dependent corticosterone synthesis
2016	suspected no endocrine effect	3849		No significant induction of CYP11B1-dependent corticosterone synthesis
2017	suspected no endocrine effect	3852		No effect on CYP11B1-dependent corticosterone synthesis
2018	suspected no endocrine effect	3853		No effect on CYP11B1-dependent corticosterone synthesis
2019	corticosteroid	3850		Induction of CYP11B1-dependent corticosterone synthesis
2020	corticosteroid	3851		Induction of CYP11B1-dependent corticosterone synthesis
2021	suspected no endocrine effect	3854		No significant induction of CYP11B1-dependent corticosterone synthesis
2022	corticosteroid	3855		Competitive inhibition of CYP11B1-dependent corticosterone synthesis
2023	corticosteroid	3855		Ki = 4.6 µM
2024	corticosteroid	3856		Competitive inhibition of CYP11B1-dependent corticosterone synthesis
2025	corticosteroid	3856		Ki = 6.7 µM
2026	corticosteroid	3857		Inhibition of CYP11B1-dependent corticosterone synthesis
2027	corticosteroid	3858		Inhibition of CYP11B1-dependent corticosterone synthesis
2028	corticosteroid	3859		Inhibition of CYP11B1-dependent corticosterone synthesis
2029	corticosteroid	3860		Inhibition of CYP11B1-dependent corticosterone synthesis

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
2030	corticosteroid	3861		Inhibition of CYP11B1-dependent corticosterone synthesis
2031	corticosteroid	3862		Weak inhibition of CYP11B1-dependent corticosterone synthesis
2032	corticosteroid	3863		Induction of CYP11B1-dependent corticosterone synthesis
2033	androgen	3864		52, 71 and 81% decrease in estradiol titres after 1, 3 and 5 weeks, respectively
2034	suspected endocrine effect	3865		F1-juveniles: reduced molting frequency
2035	suspected endocrine effect	3865		F2: decreased fecundity
2036	suspected endocrine effect	3866		Altered testosterone metabolism
2037	steroid	3867		Increased progesterone secretion (274.2% of control)
2038	steroid	3867		Increased testosterone secretion (384.2% of control)
2039	steroid	3867		Increased estradiol secretion (136.9% of control)
2040	suspected endocrine effect	3867		Reduction of cell proliferation (33.8%)
2041	steroid	3868		Decreased testosterone secretion (63% of control)
2043	steroid	3868		Increased estradiol secretion (129.2% of control)
2044	suspected endocrine effect	3868		Reduction of cell proliferation (53.5%)
2045	suspected no endocrine effect	3868		No effect on progesterone secretion
2046	suspected no endocrine effect	3869		Very weak inhibition of [3H]17-beta-estradiol binding to ER (< 10%)
2047	suspected no endocrine effect	3869		Very weak inhibition of [3H]ORG2058 binding to PR (< 10%)
2048	suspected no endocrine effect	3869		Very weak inhibition of [3H]All trans retinoic acid binding to RAR (< 10%)
2049	androgen	3870		30% inhibition of [3H]R1881 binding to AR
2050	suspected no endocrine effect	3870		Very weak inhibition of [3H]All trans retinoic acid binding to RAR (< 10%)
2051	suspected no endocrine effect	3871		Very weak inhibition of [3H]17-beta-estradiol binding to ER (< 10%)
2052	suspected no endocrine effect	3871		Very weak inhibition of [3H]ORG2058 binding to PR (< 10%)
2053	retinoid hormone	3871		23% inhibition of [3H]All trans retinoic acid binding to RAR
2054	androgen	3872		15% inhibition of [3H]R1881 binding to AR
2055	retinoid hormone	3872		24% inhibition of [3H]All trans retinoic acid binding to RAR
2056	estrogen	3873		25% inhibition of [3H]17-beta-estradiol binding to ER
2057	progestogen	3873		21% inhibition of [3H]ORG2058 binding to PR
2058	retinoid hormone	3873		35% inhibition of [3H]All trans retinoic acid binding to RAR
2059	suspected no endocrine effect	3874		Very weak inhibition of [3H]R1881 binding to AR (< 10%)
2060	suspected no endocrine effect	3874		Very weak inhibition of [3H]All trans retinoic acid binding to RAR (< 10%)
2061	suspected no endocrine effect	3875		Very weak inhibition of [3H]17-beta-estradiol binding to ER (< 10%)
2062	suspected no endocrine effect	3875		Very weak inhibition of [3H]ORG2058 binding to PR (< 10%)
2063	retinoid hormone	3875		36% inhibition of [3H]All trans retinoic acid binding to RAR
2064	suspected no endocrine effect	3876		Very weak inhibition of [3H]R1881 binding to AR (< 10%)

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
2065	suspected no endocrine effect	3876		Very weak inhibition of [3H]All trans retinoic acid binding to RAR (< 10%)
2066	suspected no endocrine effect	3877		Very weak inhibition of [3H]17-beta-estradiol binding to ER (< 10%)
2067	suspected no endocrine effect	3877		Very weak inhibition of [3H]ORG2058 binding to PR (< 10%)
2068	retinoid hormone	3877		27% inhibition of [3H]All trans retinoic acid binding to RAR
2069	suspected no endocrine effect	3878		Very weak inhibition of [3H]R1881 binding to AR (< 10%)
2070	suspected no endocrine effect	3878		Very weak inhibition of [3H]All trans retinoic acid binding to RAR (< 10%)
2071	suspected no endocrine effect	3879		Very weak inhibition of tritiated 17-beta-estradiol binding to ER (< 10%)
2072	progestogen	3879		30% inhibition of tritiated ORG2058 binding to PR
2073	suspected no endocrine effect	3879		Very weak inhibition of tritiated All trans retinoic acid binding to RAR (< 10%)
2074	androgen	3880		39% inhibition of tritiated R1881 binding to AR
2075	retinoid hormone	3880		44% inhibition of tritiated All trans retinoic acid binding to RAR
2076	suspected no endocrine effect	3881		Very weak inhibition of [3H]17-beta-estradiol binding to ER (< 10%)
2077	suspected no endocrine effect	3881		Very weak inhibition of [3H]ORG2058 binding to PR (< 10%)
2078	suspected no endocrine effect	3881		Very weak inhibition of [3H]All trans retinoic acid binding to RAR (< 10%)
2079	suspected no endocrine effect	3882		Very weak inhibition of [3H]All trans retinoic acid binding to RAR (< 10%)
2080	androgen	3882		25% inhibition of [3H]R1881 binding to AR
2081	suspected no endocrine effect	3883		Very weak inhibition of [3H]17-beta-estradiol binding to ER (< 10%)
2082	suspected no endocrine effect	3883		Very weak inhibition of [3H]ORG2058 binding to PR (< 10%)
2083	suspected no endocrine effect	3883		Very weak inhibition of [3H]All trans retinoic acid binding to RAR (< 10%)
2084	suspected no endocrine effect	3884		Very weak inhibition of [3H]All trans retinoic acid binding to RAR (< 10%)
2085	suspected no endocrine effect	3884		Very weak inhibition of [3H]R1881 binding to AR (< 10%)
2086	suspected no endocrine effect	3885		Very weak inhibition of tritiated 17-beta-estradiol binding to ER (< 10%)
2087	suspected no endocrine effect	3885		Very weak inhibition of tritiated ORG2058 binding to PR (< 10%)
2088	suspected no endocrine effect	3885		Very weak inhibition of tritiated All trans retinoic acid binding to RAR (< 10%)
2089	suspected no endocrine effect	3886		Very weak inhibition of tritiated R1881 binding to AR (< 10%)
2090	suspected no endocrine effect	3886		Very weak inhibition of tritiated All trans retinoic acid binding to RAR (< 10%)
2091	suspected no endocrine effect	3887		Very weak inhibition of [3H]17-beta-estradiol binding to ER (< 10%)
2092	suspected no endocrine effect	3887		Very weak inhibition of [3H]ORG2058 binding to PR (< 10%)
2093	retinoid hormone	3887		26% inhibition of [3H] All trans retinoic acid binding to RAR
2094	suspected no endocrine effect	3888		Very weak inhibition of [3H]R1881 binding to AR (< 10%)
2095	suspected no endocrine effect	3888		Very weak inhibition of [3H]All trans retinoic acid binding to RAR (< 10%)
2096	estrogen	3889		16% inhibition of tritiated 17-beta-estradiol binding to ER
2097	retinoid hormone	3889		21% inhibition of tritiated All trans retinoic acid binding to RAR
2098	suspected no endocrine effect	3889		Very weak inhibition of tritiated ORG2058 binding to PR (< 10%)

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
2099	suspected no endocrine effect	3890		Very weak inhibition of tritiated R1881 binding to AR (< 10%)
2100	suspected no endocrine effect	3890		Very weak inhibition of tritiated All trans retinoic acid binding to RAR (< 10%)
2101	suspected no endocrine effect	3891		Very weak inhibition of tritiated 17-beta-estradiol binding to ER (< 10%)
2102	suspected no endocrine effect	3892		Very weak inhibition of tritiated R1881 binding to AR (< 10%)
2103	suspected no endocrine effect	3892		Very weak inhibition of tritiated All trans retinoic acid binding to RAR (< 10%)
2104	progestogen	3891		20% inhibition of tritiated ORG2058 binding to PR
2105	retinoid hormone	3891		44% inhibition of tritiated All trans retinoic acid binding to RAR
2106	retinoid hormone	3894		Strong inhibition of tritiated All trans retinoic acid binding to RAR (Ki = 407 nM)
2107	suspected no endocrine effect	3893		Very weak inhibition of tritiated 17-beta-estradiol binding to ER (< 10%)
2108	suspected no endocrine effect	3893		Very weak inhibition of tritiated ORG2058 binding to PR (< 10%)
2109	suspected no endocrine effect	3893		Very weak inhibition of tritiated All trans retinoic acid binding to RAR (< 10%)
2110	suspected no endocrine effect	3894		Very weak inhibition of tritiated R1881 binding to AR (< 10%)
2111	suspected no endocrine effect	3895		Very weak inhibition of tritiated 17-beta-estradiol binding to ER (< 10%)
2112	suspected no endocrine effect	3895		Very weak inhibition of tritiated ORG2058 binding to PR (< 10%)
2113	suspected no endocrine effect	3896		Very weak inhibition of tritiated R1881 binding to AR (< 10%)
2114	suspected no endocrine effect	3896		Very weak inhibition of tritiated All trans retinoic acid binding to RAR (< 10%)
2115	retinoid hormone	3895		25% inhibition of tritiated All trans retinoic acid binding to RAR
2116	retinoid hormone	3897		24% inhibition of tritiated All trans retinoic acid binding to RAR
2117	progestogen	3897		22% inhibition of tritiated ORG2058 binding to PR
2118	suspected no endocrine effect	3897		Very weak inhibition of tritiated 17-beta-estradiol binding to ER (< 10%)
2119	suspected no endocrine effect	3898		Very weak inhibition of tritiated R1881 binding to AR (< 10%)
2120	suspected no endocrine effect	3898		Very weak inhibition of tritiated All trans retinoic acid binding to RAR (< 10%)
2121	suspected no endocrine effect	3899		Very weak inhibition of tritiated 17-beta-estradiol binding to ER (< 10%)
2122	suspected no endocrine effect	3900		Very weak inhibition of tritiated R1881 binding to AR (< 10%)
2123	suspected no endocrine effect	3900		Very weak inhibition of tritiated All trans retinoic acid binding to RAR (< 10%)
2124	retinoid hormone	3899		22% inhibition of tritiated All trans retinoic acid binding to RAR
2125	progestogen	3899		19% inhibition of tritiated ORG2058 binding to PR
2126	progestogen	3901		17% inhibition of tritiated ORG2058 binding to PR
2127	retinoid hormone	3901		23% inhibition of tritiated All trans retinoic acid binding to RAR
2128	suspected no endocrine effect	3901		Very weak inhibition of tritiated 17-beta-estradiol binding to ER (< 10%)
2129	suspected no endocrine effect	3902		Very weak inhibition of tritiated R1881 binding to AR (< 10%)
2130	suspected no endocrine effect	3902		Very weak inhibition of tritiated All trans retinoic acid binding to RAR (< 10%)
2131	suspected no endocrine effect	3903		Very weak inhibition of tritiated 17-beta-estradiol binding to ER (< 10%)
2132	suspected no endocrine effect	3903		Very weak inhibition of tritiated All trans retinoic acid binding to RAR (< 10%)

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
2133	suspected no endocrine effect	3904		Very weak inhibition of tritiated All trans retinoic acid binding to RAR (< 10%)
2134	progestogen	3903		19% inhibition of tritiated ORG2058 binding to PR
2135	progestogen	3905		17% inhibition of tritiated ORG2058 binding to PR
2136	androgen	3904		25% inhibition of tritiated R1881 binding to AR
2137	androgen	3906		37% inhibition of tritiated R1881 binding to AR
2138	estrogen	3905		Strong inhibition of tritiated 17-beta-estradiol binding to ER (Ki = 38.7 nM)
2139	retinoid hormone	3905		45% inhibition of tritiated All trans retinoic acid binding to RAR
2140	retinoid hormone	3906		34% inhibition of tritiated All trans retinoic acid binding to RAR
2141	suspected no endocrine effect	3907		Very weak inhibition of tritiated 17-beta-estradiol binding to ER (< 10%)
2142	suspected no endocrine effect	3907		Very weak inhibition of tritiated All trans retinoic acid binding to RAR (< 10%)
2143	suspected no endocrine effect	3907		Very weak inhibition of tritiated ORG2058 binding to PR (< 10%)
2144	suspected no endocrine effect	3908		Very weak inhibition of tritiated All trans retinoic acid binding to RAR (< 10%)
2145	androgen	3908		18% inhibition of tritiated R1881 binding to AR
2146	androgen	3910		25% inhibition of tritiated R1881 binding to AR
2147	suspected no endocrine effect	3909		Very weak inhibition of tritiated 17-beta-estradiol binding to ER (< 10%)
2148	suspected no endocrine effect	3909		Very weak inhibition of tritiated ORG2058 binding to PR (< 10%)
2149	suspected no endocrine effect	3909		Very weak inhibition of tritiated All trans retinoic acid binding to RAR (< 10%)
2150	suspected no endocrine effect	3910		Very weak inhibition of tritiated All trans retinoic acid binding to RAR (< 10%)
2151	suspected no endocrine effect	3911		Very weak inhibition of tritiated 17-beta-estradiol binding to ER (< 10%)
2152	suspected no endocrine effect	3911		Very weak inhibition of tritiated All trans retinoic acid binding to RAR (< 10%)
2153	suspected no endocrine effect	3912		Very weak inhibition of tritiated R1881 binding to AR (< 10%)
2154	suspected no endocrine effect	3912		Very weak inhibition of tritiated All trans retinoic acid binding to RAR (< 10%)
2155	progestogen	3911		15% inhibition of tritiated ORG2058 binding to PR
2157	suspected no endocrine effect	3913		Very weak inhibition of tritiated 17-beta-estradiol binding to ER (< 10%)
2158	suspected no endocrine effect	3913		Very weak inhibition of tritiated ORG2058 binding to PR (< 10%)
2159	suspected no endocrine effect	3913		Very weak inhibition of tritiated All trans retinoic acid binding to RAR (< 10%)
2160	suspected no endocrine effect	3914		Very weak inhibition of tritiated R1881 binding to AR (< 10%)
2161	suspected no endocrine effect	3914		Very weak inhibition of tritiated All trans retinoic acid binding to RAR (< 10%)
2162	suspected no endocrine effect	3915		Very weak inhibition of tritiated All trans retinoic acid binding to RAR (< 10%)
2163	suspected no endocrine effect	3916		Very weak inhibition of tritiated All trans retinoic acid binding to RAR (< 10%)
2164	suspected no endocrine effect	3915		Very weak inhibition of tritiated ORG2058 binding to PR (< 10%)
2165	estrogen	3915		46% inhibition of tritiated 17-beta-estradiol binding to ER
2166	androgen	3916		35% inhibition of tritiated R1881 binding to AR
2167	estrogen	3917		13% inhibition of tritiated 17-beta-estradiol binding to ER

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
2168	suspected no endocrine effect	3917		Very weak inhibition of tritiated ORG2058 binding to PR (< 10%)
2169	suspected no endocrine effect	3917		Very weak inhibition of tritiated All trans retinoic acid binding to RAR (< 10%)
2170	suspected no endocrine effect	3918		Very weak inhibition of tritiated R1881 binding to AR (< 10%)
2171	suspected no endocrine effect	3918		Very weak inhibition of tritiated All trans retinoic acid binding to RAR (< 10%)
2172	estrogen	3919		Strong inhibition of tritiated 17-beta-estradiol binding to ER (Ki = 8.7 nM)
2173	progestogen	3919		18% inhibition of tritiated ORG2058 binding to PR
2174	retinoid hormone	3919		27% inhibition of tritiated All trans retinoic acid binding to RAR
2175	androgen	3920		38% inhibition of tritiated R1881 binding to AR
2176	suspected no endocrine effect	3920		Very weak inhibition of tritiated All trans retinoic acid binding to RAR (< 10%)
2177	suspected no endocrine effect	3921		Very weak inhibition of tritiated 17-beta-estradiol binding to ER (< 10%)
2178	suspected no endocrine effect	3921		Very weak inhibition of tritiated ORG2058 binding to PR (< 10%)
2179	suspected no endocrine effect	3921		Very weak inhibition of tritiated All trans retinoic acid binding to RAR (< 10%)
2180	suspected no endocrine effect	3922		Very weak inhibition of tritiated R1881 binding to AR (< 10%)
2181	retinoid hormone	3922		41% inhibition of tritiated All trans retinoic acid binding to RAR
2182	retinoid hormone	3923		38% inhibition of tritiated All trans retinoic acid binding to RAR
2183	retinoid hormone	3924		16% inhibition of tritiated All trans retinoic acid binding to RAR
2184	androgen	3924		15% inhibition of tritiated R1881 binding to AR
2185	suspected no endocrine effect	3923		Very weak inhibition of tritiated 17-beta-estradiol binding to ER (< 10%)
2186	suspected no endocrine effect	3923		Very weak inhibition of tritiated ORG2058 binding to PR (< 10%)
2187	suspected endocrine effect	3925		Inhibition of testosterone hydroxylase activities
2188	suspected endocrine effect	3925		19.7 µM: differential inhibition of testosterone hydroxylase activities
2189	suspected endocrine effect	3926		Differential inhibition of testosterone hydroxylase activities
2190	suspected endocrine effect	3927		Differential inhibition of testosterone hydroxylase activities
2191	suspected endocrine effect	3928		Strong inhibition of testosterone hydroxylase activities (except E-hydroxylase activity)
2192	suspected endocrine effect	3929		Reduced metabolic elimination of testosterone and increased accumulation of androgenic
2193	suspected endocrine effect	3930		Reduced metabolic elimination of testosterone and increased accumulation of androgenic
2194	suspected endocrine effect	3930		Decreased fecundity
2195	suspected endocrine effect	3931		Females: increased normalized length of the abdominal process (secondary sex characterisitic)
2197	suspected endocrine effect	3932		Females: increased normalized length of the abdominal process (secondary sex characterisitic)
2199	suspected endocrine effect	3933		Males: sex specific mortality at 25 µM
2200	suspected endocrine effect	3933		Males: increased normalized length of 1st antennae (secondary sex characterisitic)
2202	suspected no endocrine effect	3931		Males: no effect on secondary sex characterisitics
2203	suspected no endocrine effect	3932		Males: no effect on secondary sex characterisitics
2204	suspected no endocrine effect	3933		Females: no effect on normalized length of abdominal process (secondary sex characterisitic)

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
2205	suspected no endocrine effect	3934		100 µg/l: acute letha
2206	suspected no endocrine effect	3934		0.1-10 µg/l: no effect on sex ratio
2207	suspected no endocrine effect	3934		0.1-10 µg/l: no effect on reproduction
2208	suspected no endocrine effect	3935		LOEC survival: 86.5 µg/l
2209	suspected no endocrine effect	3935		NOEC survival: 26.9 µg/l
2210	suspected no endocrine effect	3935		No effect on sex ratio and naupliar development
2211	suspected endocrine effect	3935		LOEC reproduction: 26.9 µg/l
2212	suspected endocrine effect	3935		NOEC reproduction: 8.7 µg/l
2213	suspected no endocrine effect	3936		LOEC survival: 86.5 µg/l
2214	suspected no endocrine effect	3936		NOEC survival: 26.9 µg/l
2215	suspected no endocrine effect	3936		No effect on sex ratio
2216	suspected endocrine effect	3936		LOEC reproduction: 26.9 µg/l
2217	suspected endocrine effect	3936		NOEC reproduction: 8.7 µg/l
2218	anti-androgen	3937		Inhibition of R1881-induced transcription
2219	anti-androgen	3938		Inhibition of R1881-induced transcription
2220	anti-androgen	3939		Inhibition of R1881-induced transcription
2221	anti-androgen	3940		Reduced TP-induced growth of SAT
2222	anti-androgen	3941		Reduced TP-induced growth of SAT
2223	anti-androgen	3942		Reduced TP-induced growth of SAT
2224	anti-androgen	3943		Reduced TP-induced growth of SAT
2226	androgen	3944		1000 mg/kg: increased TP-induced growth of SAT
2227	suspected no endocrine effect	3944		500 mg/kg: no effect on TP-induced growth of SAT
2228	anti-androgen	3945		Reduced TP-induced growth of SAT
2229	estrogen	3946		Depressed male sexual behavior
2230	estrogen	3947		Depressed male sexual behavior
2231	estrogen	3946		Inceased testis weight asymmetry
2232	estrogen	3946		Slightly decreased plasma testosterone levels (not significant)
2233	estrogen	3947		Slightly decreased plasma testosterone levels (not significant)
2234	estrogen	3947		57 ng/g: reduced area of the androgen-dependent cloacal gland
2235	anti-androgen	3948		Reduced epididymal weight
2236	anti-androgen	3949		Reduced epididymal and seminal vesicle weights
2237	suspected endocrine effect	3950		Reduced prostate and seminal vesicle weights
2239	estrogen	3952		Reduced testes, epididymal, seminal vesicles and prostate weights
2240	suspected no endocrine effect	3953		No effect on reproductice organs weights

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
2241	anti-androgen	3954		Reduced testes and seminal vesicles weights
2242	suspected endocrine effect	3955		Reduced epididymal, seminal vesicles and prostate weights
2243	suspected endocrine effect	3951		Reduced epididymal, seminal vesicle weights and prostate weights
2244	suspected endocrine effect	3956		Reduced testes, epididymal, seminal vesicles and prostate weights
2245	estrogen	3957		Reduced testes, epididymal, seminal vesicles and prostate weights
2246	suspected no endocrine effect	3958		No effect on reproductice organs weights
2247	suspected endocrine effect	3959		Reduced epididymal weights
2248	suspected no endocrine effect	3960		No effect on reproductice organs weights
2249	suspected no endocrine effect	3961		No effect on reproductice organs weights
2250	estrogen	3962		Reduced seminal vesicles and prostate weights
2251	suspected no endocrine effect	3963		No effect on reproductice organs weights
2252	suspected endocrine effect	3964		Reduced prostate and seminal vesicles weights
2253	suspected no endocrine effect	3965		No effect on reproductice organs weights
2254	suspected no endocrine effect	3966		No effect on reproductice organs weights
2255	suspected no endocrine effect	3967		No effect on reproductice organs weights
2256	estrogen	3968		Reduced seminal vesicles and prostate weights
2257	suspected no endocrine effect	3969		No effect on reproductice organs weights
2258	estrogen	3970		Reduced testes, epididymal, seminal vesicles and prostate weights
2259	suspected no endocrine effect	3971		No effect on reproductice organs weights
2260	suspected no endocrine effect	3972		No effect on reproductice organs weights
2261	suspected no endocrine effect	3973		No effect on reproductice organs weights
2262	anti-androgen	3974		Reduced testes and epididymal weights
2263	estrogen	3975		Reduced testes, epididymal and seminal vesicles weights
2264	estrogen	3976		Reduced testes, epididymal, seminal vesicles and prostate weights
2265	anti-androgen	3977		Reduced epididymal and seminal vesicles weights
2266	suspected no endocrine effect	3978		No effect on reproductice organs weights
2267	suspected endocrine effect	3979		Increased risk for testicular cancer
2268	suspected no endocrine effect	3980		No effect on TSD
2269	estrogen	3981		Strongly female biased sex ratio
2270	estrogen	3982		Decreased rate and intensity of sexual display
2271	estrogen	3983		Decreased rate and intensity of sexual display
2272	suspected endocrine effect	3984		Increased male to female sex ratio
2273	suspected endocrine effect	3985		Slightly increased male to female sex ratio (not significant)
2274	suspected endocrine effect	3986		Slightly increased male to female sex ratio (not significant)

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
2275	suspected no endocrine effect	3987		No effect on reproduction and sex ratio
2276	suspected no endocrine effect	3988		No effect on reproduction and sex ratio
2277	suspected endocrine effect	3989		Altered expression and activities of male-specific cytochrome P450 isoforms
2278	thyroid hormone	3990		Decreased serum total T4 concentrations
2279	suspected endocrine effect	3990		Increased hepatic total cytochrome P450 content
2280	thyroid hormone	3991		Decreased serum total T4 concentrations
2281	thyroid hormone	3991		Increased thyroid weight
2282	suspected endocrine effect	3991		Increased hepatic total cytochrome P450 content
2283	thyroid hormone	3992		Decreased serum total T4 concentrations
2284	thyroid hormone	3992		Day 7: decreased serum total T3 concentrations
2285	suspected endocrine effect	3992		Increased hepatic total cytochrome P450 content
2286	thyroid hormone	3993		Decreased serum total T4 concentrations
2287	thyroid hormone	3994		Decreased serum total T4 concentrations
2288	estrogen	3995		Modest uterotropic activity
2289	thyroid hormone	3995		8 mg/kg: increased serum T4 levels
2290	thyroid hormone	3995		32-96 mg/kg: decreased serum T4 levels
2291	anti-estrogen	3996		Suppression of uterotropic activity of PCB 110
2292	thyroid hormone	3996		Dose dependent depletion of serum T4
2293	suspected endocrine effect	3997		Decreased activities and expression of male-specific cytochrome P450 isoforms
2294	suspected endocrine effect	3998		Reduced gonopodium length
2295	suspected endocrine effect	3999		Decreased serum testosterone levels and reduced phallus size
2296	suspected endocrine effect	4000		Decreased serum testosterone levels and reduced phallus size
2297	suspected endocrine effect	4001		Decreased serum testosterone levels and reduced phallus size
2298	suspected endocrine effect	4002		Decreased serum testosterone levels and reduced phallus size
2299	suspected endocrine effect	4003		Decreased serum testosterone levels and reduced phallus size
2300	suspected endocrine effect	4004		Decreased serum testosterone levels and reduced phallus size
2301	suspected endocrine effect	4005		Decreased serum testosterone levels and reduced phallus size
2302	suspected endocrine effect	4006		Decreased serum testosterone levels and reduced phallus size
2303	suspected endocrine effect	4007		Decreased serum testosterone levels and reduced phallus size
2304	suspected endocrine effect	4008		Decreased serum testosterone levels and reduced phallus size
2305	suspected endocrine effect	4009		Decreased serum testosterone levels and reduced phallus size
2306	suspected endocrine effect	4010		Decreased serum testosterone levels and reduced phallus size
2307	corticosteroid	4011		10 µg/l: increased plasma cortisol levels
2309	corticosteroid	4012		Increased plasma cortisol levels

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
2310	suspected endocrine effect	4011		25 µg/l: decreased plasma calcium concentrations
2311	estrogen	4013		Dose-dependent uterotrophic activity
2312	estrogen	4013		128-250 mg/kg: dose-dependent pituitary gland hypertrophy
2313	estrogen	4016		Dose-dependent induction of estrogen-mediated activity
2314	pituitary hormone	4013		128-250 mg/kg: dose-dependent hyperprolactinaemia
2315	suspected endocrine effect	4014		Reduced pregnancy rate
2316	suspected endocrine effect	4014		Increased thyroid follicle size
2317	thyroid hormone	4015		Decreased serum T4 levels
2318	suspected endocrine effect	4015		Increased thyroid follicle size
2319	estrogen	4016		Potency relative to 17-beta-estradiol: 0.000005
2320	estrogen	4017		Dose-dependent induction of estrogen-mediated activity
2321	estrogen	4017		Potency relative to 17-beta-estradiol: 0.00005
2322	estrogen	4018		Dose-dependent induction of estrogen-mediated activity
2323	estrogen	4019		Dose-dependent induction of estrogen-mediated activity
2324	suspected no endocrine effect	4020		No induction of estrogen-mediated activity
2325	anti-estrogen	4021		Complete inhibition of 17-beta-estradiol-induced activity
2326	estrogen	4022		Increased uterine wet weight
2327	suspected no endocrine effect	4023		No displacement of tritiated 17-beta-estradiol from rhERalpha or rhERbeta
2328	estrogen	4024		Competitive inhibition of tritiated 17-beta-estradiol binding to rhERalpha and rhERbeta
2329	estrogen	4024		Potency relative to 17-beta-estradiol: 0.001
2330	estrogen	4025		3.2-fold increased risk for breast cancer
2331	estrogen	4026		2.9-fold increased risk for breast cancer
2332	estrogen	4027		Increased risk for breast cancer (significantly dependent on duration of exposure)
2333	anti-estrogen	4028		Inhibition of tritiated 17-beta-estradiol binding to ER
2334	suspected no endocrine effect	4029		No siginificant inhibition of tritiated R5020 binding to PR
2335	anti-estrogen	4030		Inhibition of tritiated 17-beta-estradiol binding to ER
2336	anti-estrogen	4031		Inhibition of tritiated 17-beta-estradiol binding to ER
2337	anti-estrogen	4032		Inhibition of tritiated 17-beta-estradiol binding to ER
2338	anti-estrogen	4033		Inhibition of [3H]17-beta-estradiol binding to ER
2339	anti-estrogen	4034		Inhibition of tritiated 17-beta-estradiol binding to ER
2340	anti-estrogen	4035		Inhibition of tritiated 17-beta-estradiol binding to ER
2341	suspected no endocrine effect	4036		No interaction with ER
2342	suspected no endocrine effect	4037		No interaction with ER
2343	anti-estrogen	4038		Inhibition of tritiated 17-beta-estradiol binding to ER

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
2344	anti-estrogen	4039		Inhibition of tritiated 17-beta-estradiol binding to ER
2345	anti-estrogen	4040		Inhibition of tritiated 17-beta-estradiol binding to ER
2346	anti-estrogen	4041		Inhibition of tritiated 17-beta-estradiol binding to ER
2347	anti-estrogen	4042		Inhibition of [3H]17-beta-estradiol binding to ER
2348	anti-estrogen	4043		Inhibition of tritiated 17-beta-estradiol binding to ER
2349	suspected no endocrine effect	4044		No significant interaction with ER
2350	anti-estrogen	4045		25% inhibition of R5020 binding to PR
2351	anti-estrogen	4046		45% inhibition of R5020 binding to PR
2352	anti-estrogen	4047		48% inhibition of R5020 binding to PR
2353	suspected no endocrine effect	4048		No siginificant inhibition of tritiated R5020 binding to PR
2354	suspected no endocrine effect	4049		No siginificant inhibition of tritiated R5020 binding to PR
2355	suspected no endocrine effect	4050		No siginificant inhibition of tritiated R5020 binding to PR
2356	suspected no endocrine effect	4051		No siginificant inhibition of tritiated R5020 binding to PR
2357	suspected no endocrine effect	4052		No siginificant inhibition of tritiated R5020 binding to PR
2358	suspected no endocrine effect	4053		No siginificant inhibition of tritiated R5020 binding to PR
2359	suspected no endocrine effect	4054		No siginificant inhibition of tritiated R5020 binding to PR
2360	suspected no endocrine effect	4055		No siginificant inhibition of [3H]R5020 binding to PR
2361	suspected no endocrine effect	4056		No siginificant inhibition of [3H]R5020 binding to PR
2365	suspected no endocrine effect	4060		No interaction with ER
2366	estrogen	4057		Dose-dependent inhibition of tritiated 17-beta-estradiol binding to ER
2367	estrogen	4058		Dose-dependent inhibition of tritiated 17-beta-estradiol binding to ER
2368	estrogen	4059		Dose-dependent inhibition of tritiated 17-beta-estradiol binding to ER
2369	estrogen	4061		Dose-dependent inhibition of tritiated 17-beta-estradiol binding to ER
2370	suspected no endocrine effect	4062		No interaction with ER
2371	suspected no endocrine effect	4065		No interaction with ER
2372	estrogen	4063		20% inhibition of tritiated 17-beta-estradiol binding to ER
2373	estrogen	4064		Dose-dependent inhibition of tritiated 17-beta-estradiol binding to ER
2374	estrogen	4066		Dose-dependent induction of ER-mediated activity
2375	estrogen	4067		Dose-dependent induction of ER-mediated activity
2376	estrogen	4068		Dose-dependent induction of ER-mediated activity
2377	suspected no endocrine effect	4069		No induction of ER-mediated activity
2378	estrogen	4070		Dose-dependent induction of ER-mediated activity
2379	suspected no endocrine effect	4071		No induction of ER-mediated activity
2380	estrogen	4072		Dose-dependent induction of ER-mediated activity

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
2381	estrogen	4073		Dose-dependent induction of ER-mediated activity
2382	suspected no endocrine effect	4074		No induction of ER-mediated activity
2383	estrogen	4075		Dose-dependent uterotrophic activity
2384	estrogen	4076		Dose-dependent uterotrophic activity
2385	estrogen	4077		Dose-dependent uterotrophic activity
2386	estrogen	4078		Dose-dependent uterotrophic activity
2387	estrogen	4079		Dose-dependent uterotrophic activity
2388	estrogen	4080		Dose-dependent uterotrophic activity
2389	estrogen	4081		Dose-dependent uterotrophic activity
2390	suspected no endocrine effect	4082		No significant uterotrophic activity
2391	suspected no endocrine effect	4083		No significant binding to AR in brain and ovaries
2392	suspected endocrine effect	4083		RBA to testosterone at 50%: 0.008%
2393	suspected no endocrine effect	4084		No significant binding to AR in brain and ovaries
2394	suspected endocrine effect	4084		RBA to testosterone at 50%: 0.005%
2395	suspected no endocrine effect	4085		No significant binding to AR in brain and ovaries
2396	suspected endocrine effect	4085		RBA to testosterone at 50%: 0.006%
2397	suspected no endocrine effect	4086		No significant binding to AR in brain and ovaries
2398	suspected endocrine effect	4086		RBA to testosterone at 50%: 0.008%
2399	suspected no endocrine effect	4087		No significant binding to AR in brain and ovaries
2400	suspected endocrine effect	4087		RBA to testosterone at 50%: 0.016%
2401	suspected no endocrine effect	4088		No binding to AR in brain, testes and ovaries
2402	suspected no endocrine effect	4089		No binding to AR in brain, testes and ovaries
2403	suspected no endocrine effect	4090		No binding to AR in brain, testes and ovaries
2404	suspected no endocrine effect	4091		No binding to AR in brain, testes and ovaries
2405	suspected no endocrine effect	4092		No binding to AR in brain, testes and ovaries
2406	suspected no endocrine effect	4093		No binding to AR in brain, testes and ovaries
2407	suspected no endocrine effect	4094		No binding to AR in brain, testes and ovaries
2408	suspected no endocrine effect	4095		No binding to AR in brain, testes and ovaries
2409	suspected no endocrine effect	4096		No binding to AR in brain, testes and ovaries
2410	suspected no endocrine effect	4097		No binding to AR in brain, testes and ovaries
2411	suspected no endocrine effect	4098		No binding to AR in brain, testes and ovaries
2412	suspected no endocrine effect	4099		No binding to AR in brain, testes and ovaries
2413	suspected no endocrine effect	4100		No binding to AR in brain, testes and ovaries
2414	suspected no endocrine effect	4101		No binding to AR in brain, testes and ovaries

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
2415	suspected no endocrine effect	4102		No binding to AR in brain, testes and ovaries
2416	suspected endocrine effect	4103		10 µM: sublethal embryonal and larval developmental abnormalities
2417	suspected endocrine effect	4103		10 µM: decreased hatching succes
2418	suspected endocrine effect	4103		25 µM: lethal developmental abnormalities (no survival to hatching age)
2419	suspected endocrine effect	4104		10 µM: sublethal embryonal and larval developmental abnormalities
2420	suspected no endocrine effect	4103		50-100 µM: acute lethal
2421	suspected endocrine effect	4104		10 µM: decreased hatching succes
2422	suspected endocrine effect	4104		25 µM: lethal developmental abnormalities (no survival to hatching age)
2423	suspected no endocrine effect	4104		50-100 µM: acute lethal
2424	suspected no endocrine effect	4105		Acute lethal
2425	suspected no endocrine effect	4106		Acute lethal
2426	estrogen	4107		Increased plasma VTG concentrations
2427	suspected endocrine effect	4107		150 µg/l: reduced plasma pregnenolone levels
2428	suspected endocrine effect	4107		150 µg/l: increased EROD activity
2429	estrogen	4108		Increased plasma VTG concentrations
2430	estrogen	4109		Increased plasma VTG concentrations
2431	estrogen	4109		28 µg/l: decreased plasma testosterone levels
2432	suspected endocrine effect	4108		30-60 µg/l: reduced plasma pregnenolone levels
2433	suspected endocrine effect	4109		28-58 µg/l: reduced plasma pregnenolone levels
2434	suspected endocrine effect	4108		30-60 µg/l: increased EROD activity
2435	suspected endocrine effect	4109		28-58 µg/l: increased EROD activity
2436	steroid	4110		Males: decreased plasma testosterone and 11-ketotestosterone levels
2437	steroid	4110		Females: decreased plasma testosterone and 17-beta-estradiol levels
2438	suspected endocrine effect	4110		1200 µg/l: decreased cholesterol levels in testis
2439	steroid	4111		Decreased hCG-stimulated testosterone synthesis
2440	suspected no endocrine effect	4111		No effect on basal testosterone synthesis
2441	steroid	4111		600-1200 µg/l: decreased hCG-stimulated pregnenolone synthesis
2442	steroid	4111		1200 µg/l: decreased basal pregnenolone synthesis
2443	estrogen	4112		Males: increased plasma testosterone levels
2444	estrogen	4112		Females: increased plasma 17-beta-estradiol levels
2445	progestogen	4113		Increased hepatic progesterone catabolism
2446	thyroid hormone	4113		Decreased plasma total T3 and total T4 concentrations
2447	suspected endocrine effect	4113		Increased litter size and number of liveborn kits (approx. 50%)
2448	suspected endocrine effect	4113		Decreased birth weight (20%)

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
2449	suspected endocrine effect	4113		Decreased kit survival
2450	progestogen	4114		Increased hepatic progesterone catabolism
2451	thyroid hormone	4114		Decreased plasma total T3 and total T4 concentrations
2452	suspected endocrine effect	4114		Increased litter size and number of liveborn kits (approx. 50%)
2453	suspected endocrine effect	4114		Decreased birth weight (20%)
2454	suspected endocrine effect	4114		Decreased kit survival
2455	progestogen	4115		Increased hepatic progesterone catabolism
2456	thyroid hormone	4115		Decreased plasma total T3 and total T4 concentrations
2457	suspected endocrine effect	4115		Increased litter size and number of liveborn kits (approx. 50%)
2458	suspected endocrine effect	4115		Decreased birth weight (20%)
2459	suspected endocrine effect	4115		Decreased kit survival
2460	progestogen	4116		Increased hepatic progesterone catabolism
2461	thyroid hormone	4116		Decreased plasma total T3 and total T4 concentrations
2462	suspected endocrine effect	4116		Increased litter size and number of liveborn kits (approx. 50%)
2463	suspected endocrine effect	4116		Decreased birth weight (20%)
2464	suspected endocrine effect	4116		Decreased kit survival
2465	progestogen	4117		Increased hepatic progesterone catabolism
2466	thyroid hormone	4117		Decreased plasma total T3 and total T4 concentrations
2467	suspected endocrine effect	4117		Increased litter size and number of liveborn kits (approx. 50%)
2468	suspected endocrine effect	4117		Decreased birth weight (20%)
2469	suspected endocrine effect	4117		Decreased kit survival
2470	progestogen	4118		Increased hepatic progesterone catabolism
2471	thyroid hormone	4118		Decreased plasma total T3 and total T4 concentrations
2472	suspected endocrine effect	4118		Increased litter size and number of liveborn kits (approx. 50%)
2473	suspected endocrine effect	4118		Decreased birth weight (20%)
2474	suspected endocrine effect	4118		Decreased kit survival
2475	progestogen	4119		Increased hepatic progesterone catabolism
2476	thyroid hormone	4119		Decreased plasma total T3 and total T4 concentrations
2477	suspected endocrine effect	4119		Increased litter size and number of liveborn kits (approx. 50%)
2478	suspected endocrine effect	4119		Decreased birth weight (20%)
2479	suspected endocrine effect	4119		Decreased kit survival
2480	progestogen	4120		Increased hepatic progesterone catabolism
2481	thyroid hormone	4120		Decreased plasma total T3 and total T4 concentrations
2482	suspected endocrine effect	4120		Increased litter size and number of liveborn kits (approx. 50%)

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
2483	suspected endocrine effect	4120		Decreased birth weight (20%)
2484	suspected endocrine effect	4120		Decreased kit survival
2485	progestogen	4121		Increased hepatic progesterone catabolism
2486	thyroid hormone	4121		Decreased plasma total T3 and total T4 concentrations
2487	suspected endocrine effect	4121		Increased litter size and number of liveborn kits (approx. 50%)
2488	suspected endocrine effect	4121		Decreased birth weight (20%)
2489	suspected endocrine effect	4121		Decreased kit survival
2490	progestogen	4122		Increased hepatic progesterone catabolism
2491	thyroid hormone	4122		Decreased plasma total T3 and total T4 concentrations
2492	suspected endocrine effect	4122		Increased litter size and number of liveborn kits (approx. 50%)
2493	suspected endocrine effect	4122		Decreased birth weight (20%)
2494	suspected endocrine effect	4122		Decreased kit survival
2495	progestogen	4123		Increased hepatic progesterone catabolism
2496	thyroid hormone	4123		Decreased plasma total T3 and total T4 concentrations
2497	suspected endocrine effect	4123		Increased litter size and number of liveborn kits (approx. 50%)
2498	suspected endocrine effect	4123		Decreased birth weight (20%)
2499	suspected endocrine effect	4123		Decreased kit survival
2500	progestogen	4124		Increased hepatic progesterone catabolism
2501	thyroid hormone	4124		Decreased plasma total T3 and total T4 concentrations
2502	suspected endocrine effect	4124		Increased litter size and number of liveborn kits (approx. 50%)
2503	suspected endocrine effect	4124		Decreased birth weight (20%)
2504	suspected endocrine effect	4124		Decreased kit survival
2505	progestogen	4125		Increased hepatic progesterone catabolism
2506	thyroid hormone	4125		Decreased plasma total T3 and total T4 concentrations
2507	suspected endocrine effect	4125		Increased litter size and number of liveborn kits (approx. 50%)
2508	suspected endocrine effect	4125		Decreased birth weight (20%)
2509	suspected endocrine effect	4125		Decreased kit survival
2510	progestogen	4126		Increased hepatic progesterone catabolism
2511	thyroid hormone	4126		Decreased plasma total T3 and total T4 concentrations
2512	suspected endocrine effect	4126		Increased litter size and number of liveborn kits (approx. 50%)
2513	suspected endocrine effect	4126		Decreased birth weight (20%)
2514	suspected endocrine effect	4126		Decreased kit survival
2515	progestogen	4127		Increased hepatic progesterone catabolism
2516	thyroid hormone	4127		Decreased plasma total T3 and total T4 concentrations

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
2517	suspected endocrine effect	4127		Increased litter size and number of liveborn kits (approx. 50%)
2518	suspected endocrine effect	4127		Decreased birth weight (20%)
2519	suspected endocrine effect	4127		Decreased kit survival
2520	progestogen	4128		Increased hepatic progesterone catabolism
2521	thyroid hormone	4128		Decreased plasma total T3 and total T4 concentrations
2522	suspected endocrine effect	4128		Increased litter size and number of liveborn kits (approx. 50%)
2523	suspected endocrine effect	4128		Decreased birth weight (20%)
2524	suspected endocrine effect	4128		Decreased kit survival
2525	estrogen	4129		100% female sex ratio
2526	estrogen	4129		Induction of testis-ova
2527	estrogen	4130		5-50 µg/l: induction of testis-ova
2528	suspected no endocrine effect	4130		50 µg/l: acute lethal
2529	suspected endocrine effect	4131		Delayed hatching of offspring
2530	estrogen	4131		Female offspring at sexual maturity: more developed oocytes
2531	estrogen	4131		Male offspring at 10 months of age: increased induction of vitellogenesis
2532	estrogen	4132		Induction of estrogen-mediated transcription
2533	estrogen	4133		Induction of estrogen-mediated transcription
2534	estrogen	4134		Induction of estrogen-mediated transcription
2535	estrogen	4135		Induction of vitelllogenesis
2536	estrogen	4136		Induction of vitelllogenesis
2537	suspected no endocrine effect	4137		No induction of vitellogenesis
2538	suspected no endocrine effect	4139		No induction of vitellogenesis
2539	estrogen	4138		Induction of vitelllogenesis
2540	estrogen	4140		50-100: induction of vitelllogenesis
2541	suspected no endocrine effect	4141		No significant induction of vitellogenesis
2542	suspected endocrine effect	4142		25-50 µg/l: disturbed male reproductive behaviour
2543	suspected endocrine effect	4142		25-50 µg/l: decreased fertilization rate
2544	suspected endocrine effect	4142		Disturbed 2nd generation embryonal and larval development
2545	suspected endocrine effect	4143		Decreased spawning frequency
2546	suspected endocrine effect	4143		Decreased hatching success
2547	suspected endocrine effect	4143		Combination with 1µg/kg/day PCB 48: additive effects on decreased spawning frequency, egg
2548	suspected endocrine effect	4144		Decreased spawning frequency
2549	suspected endocrine effect	4144		Decreased hatching success
2550	suspected endocrine effect	4144		Combination with 1µg/kg/day TBT: additive effects on decreased spawning frequency, egg number

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
2551	suspected endocrine effect	4144		Combination with 1µg/kg/day TBT: antagonistic effect on TBT-induced embryotoxicity
2552	suspected endocrine effect	4145		Increased nest abandonment and reduced hatching
2553	thyroid hormone	4146		Increased plasma T4 levels
2554	thyroid hormone	4146		Larger thyroid follicles and follicle epithelial cell heights
2555	suspected endocrine effect	4147		Biphasic induction of CYP1A activity (stronger at lower concentrations): EC50 = 0.13 nM
2556	suspected endocrine effect	4147		Dose-dependent increase of CYP1A expression: EC50 = 0.21nM
2557	suspected endocrine effect	4148		Biphasic induction of CYP1A activity (stronger at lower concentrations): EC50 = 0.37 nM
2558	suspected endocrine effect	4148		Dose-dependent increase of CYP1A expression: EC50 = 7.9 nM
2559	suspected endocrine effect	4149		Biphasic induction of CYP1A activity (stronger at lower concentrations): EC50 = 78 nM
2560	suspected endocrine effect	4149		Dose-dependent increase of CYP1A expression: EC50 = 1300 nM
2561	suspected no endocrine effect	4150		No ER-mediated transcription
2562	suspected no endocrine effect	4151		No ER-mediated transcription
2563	suspected no endocrine effect	4152		No ER-mediated transcription
2564	suspected no endocrine effect	4153		No ER-mediated transcription
2565	suspected no endocrine effect	4154		No ER-mediated transcription
2566	suspected no endocrine effect	4155		No ER-mediated transcription
2567	suspected no endocrine effect	4156		No ER-mediated transcription
2568	suspected no endocrine effect	4157		No ER-mediated transcription
2569	suspected no endocrine effect	4158		No ER-mediated transcription
2570	estrogen	4159		Induction of ER-mediated transcription
2571	estrogen	4160		Induction of ER-mediated transcription
2572	estrogen	4161		Induction of ER-mediated transcription
2573	estrogen	4162		Induction of ER-mediated transcription
2574	estrogen	4163		Induction of ER-mediated transcription
2575	estrogen	4164		Induction of ER-mediated transcription
2576	estrogen	4165		Induction of ER-mediated transcription
2577	estrogen	4166		Induction of ER-mediated transcription
2578	estrogen	4167		Induction of ER-mediated transcription
2579	estrogen	4168		Induction of ER-mediated transcription
2580	estrogen	4169		Induction of ER-mediated transcription
2581	estrogen	4170		Induction of ER-mediated transcription
2582	estrogen	4171		Induction of ER-mediated transcription
2583	estrogen	4172		Induction of ER-mediated transcription
2584	estrogen	4173		Induction of ER-mediated transcription

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
2585	suspected no endocrine effect	4174		No ER-mediated transcription
2586	suspected no endocrine effect	4175		No ER-mediated transcription
2587	suspected no endocrine effect	4176		No ER-mediated transcription
2588	suspected no endocrine effect	4177		No ER-mediated transcription
2589	corticosteroid	4178		Decreased ACTH-stimulated cortisol secretion
2590	corticosteroid	4178		50-100 mg/l: decreased cAMP-stimulated cortisol secretion
2591	corticosteroid	4179		Decreased ACTH-stimulated cortisol secretion
2592	corticosteroid	4179		Decreased cAMP-stimulated cortisol secretion
2593	suspected no endocrine effect	4180		No effect on ACTH-stimulated cortisol secretion
2594	suspected no endocrine effect	4180		No effect on cAMP-stimulated cortisol secretion
2595	estrogen	4181		Competitive inhibition of tritiated 17-beta-estradiol binding to ER
2596	estrogen	4181		Relative potency to 17-beta-estradiol: 0.000165
2597	sex steroid	4182		Competitive inhibition of tritiated 17-beta-estradiol binding to SHBG
2598	estrogen	4181		1000 mg/l: 83% inhibition of tritiated 17-beta-estradiol binding to ER
2599	estrogen	4183		Dose-dependent induction of ER-mediated gene expression
2600	suspected endocrine effect	4184		Dose-dependent AhR-mediated gene expression
2601	suspected endocrine effect	4184		Relative dioxinlike activity: 0.000731
2602	suspected endocrine effect	4185		Dose-dependent AhR-mediated gene expression
2603	suspected endocrine effect	4187		Induction of CYP1A1 and CYP2B10 expression
2604	estrogen	4186		Dose-dependent induction of estrogen-mediated gene expression
2605	suspected no endocrine effect	4188		No correlation between reduced fertility and Pb blood levels
2606	estrogen	4189		Induction of cell proliferation
2607	estrogen	4189		Relative potency to 17-beta-estradiol: 0.001%
2608	estrogen	4190		Induction of cell proliferation
2609	estrogen	4191		Induction of cell proliferation
2610	suspected no endocrine effect	4192		No induction of cell proliferation
2611	suspected no endocrine effect	4193		No induction of cell proliferation
2612	suspected no endocrine effect	4194		No induction of cell proliferation
2613	suspected no endocrine effect	4195		No induction of cell proliferation
2614	suspected no endocrine effect	4196		No induction of cell proliferation
2615	suspected no endocrine effect	4197		No induction of cell proliferation
2616	suspected no endocrine effect	4198		No induction of cell proliferation
2617	suspected no endocrine effect	4199		No induction of cell proliferation
2618	suspected no endocrine effect	4200		No induction of cell proliferation

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
2619	suspected no endocrine effect	4201		No induction of cell proliferation
2620	suspected no endocrine effect	4202		No induction of cell proliferation
2621	suspected no endocrine effect	4203		No significant induction of cell proliferation
2622	suspected no endocrine effect	4204		No significant induction of cell proliferation
2623	suspected no endocrine effect	4205		No significant induction of cell proliferation
2624	suspected no endocrine effect	4206		No significant induction of cell proliferation
2625	suspected no endocrine effect	4207		No significant induction of cell proliferation
2626	suspected no endocrine effect	4208		No significant induction of cell proliferation
2627	estrogen	4209		Induction of ER-mediated transcription
2628	estrogen	4209		Potency relative to 17-beta-estradiol: 0.00001-0.000001
2629	estrogen	4210		Induction of ER-mediated transcription
2630	estrogen	4225		Very weak induction of ER-mediated transcription
2631	suspected no endocrine effect	4211		Cytotoxic
2632	suspected no endocrine effect	4212		Cytotoxic
2633	suspected no endocrine effect	4213		Cytotoxic
2634	suspected no endocrine effect	4214		Cytotoxic
2635	suspected no endocrine effect	4215		Cytotoxic
2636	suspected no endocrine effect	4216		Cytotoxic
2637	suspected no endocrine effect	4217		Cytotoxic
2638	suspected no endocrine effect	4218		Cytotoxic
2639	suspected no endocrine effect	4219		Cytotoxic
2640	suspected no endocrine effect	4220		Cytotoxic
2641	suspected no endocrine effect	4221		Cytotoxic
2642	suspected no endocrine effect	4222		Cytotoxic
2643	suspected no endocrine effect	4223		Cytotoxic
2644	suspected no endocrine effect	4224		Cytotoxic
2645	estrogen	4226		Very weak induction of ER-mediated transcription
2646	estrogen	4227		Very weak induction of ER-mediated transcription
2647	estrogen	4228		Very weak induction of ER-mediated transcription
2654	thyroid hormone	4229		10 mg/kg: increased serum T4 levels
2655	thyroid hormone	4229		Increased serum T3 levels in males
2656	thyroid hormone	4229		10 mg/kg: increased thyroid weight in males
2657	thyroid hormone	4229		10 mg/kg: thyroid follicular cell hypertrophy
2658	thyroid releasing hormone	4229		0.2-10 mg/kg: increased TSH levels in males

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
2659	thyroid releasing hormone	4229		0.05-10 mg/kg: increased TSH levels in females
2660	thyroid releasing hormone	4230		0.2-10 mg/kg: increased TSH levels in males
2661	thyroid releasing hormone	4230		10 mg/kg: increased TSH levels in females
2662	thyroid hormone	4230		Increased serum T3 and T4 levels
2663	thyroid hormone	4230		10 mg/kg: increased thyroid weight and hyroid follicular cell hypertrophy
2664	suspected no endocrine effect	4231		No (anti-)estrogenic effects
2665	suspected no endocrine effect	4232		No (anti-)estrogenic effects
2666	suspected no endocrine effect	4233		No (anti-)estrogenic effects
2667	suspected no endocrine effect	4234		No (anti-)estrogenic effects
2668	suspected no endocrine effect	4235		No (anti-)estrogenic effects
2669	suspected no endocrine effect	4236		No (anti-)estrogenic effects
2670	suspected no endocrine effect	4237		No (anti-)estrogenic effects
2671	suspected no endocrine effect	4238		No (anti-)estrogenic effects
2672	suspected no endocrine effect	4239		No (anti-)estrogenic effects
2673	suspected no endocrine effect	4240		No (anti-)estrogenic effects
2674	suspected no endocrine effect	4241		No (anti-)estrogenic effects
2675	suspected no endocrine effect	4242		No (anti-)estrogenic effects
2676	suspected no endocrine effect	4243		No (anti-)estrogenic effects
2677	suspected no endocrine effect	4244		No (anti-)estrogenic effects
2678	suspected no endocrine effect	4245		No (anti-)estrogenic effects
2679	suspected no endocrine effect	4246		No (anti-)estrogenic effects
2680	estrogen	4247		Induction of ERalpha-mediated transactivition
2681	estrogen	4248		Induction of ERalpha-mediated transactivition
2682	suspected no endocrine effect	4248		50 µM: cytotoxic
2683	estrogen	4249		Dose-dependent displacement of flourochrome ES1 from hERalpha
2684	estrogen	4250		Dose-dependent displacement of flourochrome ES1 from hERalpha
2685	anti-estrogen	4251		Dose-dependent displacement of fluorochrome ES1 from hERalpha
2686	anti-estrogen	4252		Inhibition of 17-beta-estradiol-induced gene expression
2687	suspected no endocrine effect	4253		No (anti-)estrogenic effects
2688	suspected no endocrine effect	4254		No (anti-)estrogenic effects
2689	suspected no endocrine effect	4255		No (anti-)estrogenic effects
2690	suspected no endocrine effect	4256		No (anti-)estrogenic effects
2691	suspected no endocrine effect	4257		No (anti-)estrogenic effects
2692	suspected no endocrine effect	4258		No (anti-)estrogenic effects

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
2693	suspected no endocrine effect	4259		No (anti-)estrogenic effects
2694	suspected no endocrine effect	4260		No (anti-)estrogenic effects
2695	estrogen	4261		Induction of hERalpha-mediated transcription
2696	estrogen	4262		Induction of hERalpha-mediated transcription
2697	anti-estrogen	4263		Inhibition of 17-beta-estradiol-induced transcription
2698	suspected endocrine effect	4264		Significant induction of selected enzymes involved in testosterone metabolism
2699	suspected endocrine effect	4265		Significant induction of selected enzymes involved in testosterone metabolism
2700	anti-androgen	4266		Inhibition of R1881 binding to hAR
2701	anti-androgen	4267		Inhibition of tritiated R1881 binding to hAR
2702	anti-androgen	4268		Inhibition of DHT-induced transcriptional activation
2703	anti-androgen	4269		Inhibition of DHT-induced transcriptional activation
2704	anti-androgen	4270		Reduction in androgen-dependent SAT weight
2705	anti-androgen	4271		Reduction in androgen-dependent SAT weights
2706	anti-androgen	4272		Reduction in androgen-dependent SAT weights
2707	anti-androgen	4273		Alteration of androgen-regulated ventral prostate gene expression
2708	anti-androgen	4274		Alteration of androgen-regulated ventral prostate gene expression
2709	anti-androgen	4274		Reduction in androgen-dependent SAT weights
2710	anti-androgen	4275		Epididymal and testicular malformations
2711	anti-androgen	4275		Testes: seminiferous tubules: aspermatogenesis
2712	anti-androgen	4275		Epididymus: diffuse epithelial hypertrophy and hypospermia
2713	anti-androgen	4276		Epididymal and testicular malformations
2714	anti-androgen	4276		Testes: seminiferous tubules: aspermatogenesis
2715	anti-androgen	4276		Epididymus: diffuse epithelial hypertrophy and hypospermia
2716	estrogen	4277		Increased mean uterus wet weight (EC50 = 0.72 mg/day)
2717	estrogen	4277		2 mg/day: increased luminal epithelial height and thickness of stromal and myometrial layers
2718	retinoid hormone	4278		60-70% suppression of retinoid-induced transcription of transglutaminase mRNA
2719	catecholamine	4279		Dose-dependent inhibition of TH-mediated dopamine synthesis
2720	catecholamine	4279		100-200 µM: dose-dependent inhibition of DbH-mediated norepinephrine synthesis
2721	suspected no endocrine effect	4279		200 µM: reduced cell viability at 24 hours of exposure
2722	catecholamine	4280		Dose-dependent inhibition of TH-mediated dopamine synthesis
2723	catecholamine	4280		100-200 µM: dose-dependent inhibition of DbH-mediated norepinephrine synthesis
2724	catecholamine	4281		Stimulation of DbH-mediated norepinephrine synthesis
2725	catecholamine	4281		400 µM: inhibition of TH-mediated dopamine synthesis
2726	suspected endocrine effect	4282		Stimulated ovarian maturation, measured as an increased egg production rate

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
2727	suspected endocrine effect	4283		Stimulated ovarian maturation, measured as an increased egg production rate
2728	suspected endocrine effect	4284		Decreased frequency of males
2729	anti-estrogen	4285		Failure of the fusion of the Mullerian ducts
2730	anti-estrogen	4285		Increased thickness of mesenchymal tissue between caudal Mullerian ducts
2731	anti-estrogen	4285		Inhibition of regression of Wolffian ducts
2732	suspected no endocrine effect	4286		No significant weights and histologic changes of liver, kidneys and testes
2733	suspected no endocrine effect	4286		No significant induction of hepatic peroxisomal enzymes, DNA synthesis and gap junctional
2734	suspected no endocrine effect	4287		No significant weights and histologic changes of liver, kidneys and testes
2735	suspected no endocrine effect	4287		No significant induction of hepatic peroxisomal enzymes, DNA synthesis and gap junctional
2736	suspected no endocrine effect	4288		Decreased testes/epididymides and thyroid/parathyroid weights
2737	suspected no endocrine effect	4288		Decreased serum calcium concentrations
2738	suspected no endocrine effect	4288		Increased serum triglyceride levels
2739	suspected no endocrine effect	4289		Decreased maternal and offspring body weight
2740	suspected no endocrine effect	4289		No effect on play behavior
2741	suspected no endocrine effect	4289		Sexually dimorphic effects on running wheel activity and saccharin solution consumption
2742	estrogen	4290		Induction of ERalpha-mediated transcription
2743	estrogen	4291		Induction of ERalpha-mediated transcription
2744	estrogen	4292		Induction of ERalpha-mediated transcription
2745	suspected no endocrine effect	4293		No significant induction of ERalpha-mediated transcription
2746	suspected no endocrine effect	4294		No induction of ERalpha-mediated transcription
2747	suspected no endocrine effect	4294		0.1-1 µM: cytotoxic
2748	suspected no endocrine effect	4295		2500-12,500 ppm: increased liver and kidney weights of males
2749	suspected no endocrine effect	4295		12,500 ppm: increased liver weights of females
2750	suspected endocrine effect	4295		500-12,500 ppm: bilateral aspermatogenesis in males
2751	suspected endocrine effect	4295		2500-12,500 ppm: spongiosis hepatis in males
2752	suspected endocrine effect	4295		12,500 ppm: pancreatic acinar cell adenoma in males
2753	suspected no endocrine effect	4296		Female offspring: no apparent adverse effects on pubertal development and reproductive functions
2754	suspected no endocrine effect	4296		Male offspring: no significant effects on reproductive organ weights and micromorphology
2755	estrogen	4297		Female offspring: increased volume of SDN-POA and irregular estrous cyclicity
2756	suspected no endocrine effect	4297		Female offspring: no significant effect on pubertal development
2757	suspected no endocrine effect	4297		Male offspring: no significant effects on reproductive organ weights and micromorphology
2758	anti-androgen	4298		Reduced AGD
2759	anti-androgen	4298		Presence of areolas, nipples and malformations of the phallus
2760	anti-androgen	4298		Reduced LA/BC weight

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
2761	anti-androgen	4298		Day 18-19: reduced ventral prostate weight
2762	anti-androgen	4299		Reduced AGD
2763	anti-androgen	4299		Presence of areolas and retained nipples
2764	anti-androgen	4299		Vaginal pouch, cleft prepuce, cleft phallus accompanied by exposed os and hypospadias
2765	anti-androgen	4299		400 mg/kg: ectopic and undescended testes
2766	anti-androgen	4299		Reduced weight of seminal vesicles and ventral prostate
2767	anti-androgen	4300		500 mg/kg: reduced AGD in male offspring
2768	anti-androgen	4300		100-500 mg/kg: dose-dependent incidence of areolas and nipple development in male offspring
2769	anti-androgen	4300		500 mg/kg: reduced weights of epididymides, dorsolateral prostate and LA/BC in male offspring
2770	anti-androgen	4300		500 mg/kg: malformations of reproductive tract, seminiferous tubule degeneration and focal
2771	suspected no endocrine effect	4300		Female offspring: no treatment-related effects on reproductive organ weights
2772	suspected endocrine effect	4301		Delayed pubertal onset
2773	suspected endocrine effect	4301		Decreased relative and absolute uterine weight
2774	suspected no endocrine effect	4302		No effect on pubertal onset
2775	suspected no endocrine effect	4302		No effect on ovarian, uterine and thyroid weights
2776	suspected no endocrine effect	4303		No effect on pubertal onset
2777	suspected no endocrine effect	4303		No effect on ovarian, uterine and thyroid weights
2778	suspected endocrine effect	4304		Delayed pubertal onset
2779	suspected endocrine effect	4304		Decreased relative and absolute uterine weight
2780	suspected endocrine effect	4305		Decreased relative and absolute ovarian and thyroid weight
2781	thyroid releasing hormone	4305		Increased serum TSH levels
2782	thyroid hormone	4305		Decreased serum T4 levels
2783	thyroid hormone	4305		Thyroid hyperplasia and thyroid follicular cell hypertrophy
2784	thyroid hormone	4303		Slight thyroid follicular cell hypertrophy
2785	suspected no endocrine effect	4306		No significant displacement of T4 from transthyretin
2786	suspected no endocrine effect	4307		No significant displacement of T4 from transthyretin
2787	thyroid hormone	4308		Displacement of T4 from transthyretin
2788	thyroid hormone	4309		Displacement of T4 from transthyretin
2789	thyroid hormone	4310		Displacement of T4 from transthyretin
2790	suspected no endocrine effect	4311		No significant displacement of T4 from transthyretin
2791	suspected no endocrine effect	4312		No significant displacement of T4 from transthyretin
2792	suspected no endocrine effect	4313		No significant displacement of T4 from transthyretin
2793	suspected no endocrine effect	4314		No significant displacement of T4 from transthyretin
2794	suspected no endocrine effect	4315		No significant displacement of T4 from transthyretin

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
2795	thyroid hormone	4316		Displacement of T4 from transthyretin
2796	thyroid hormone	4317		Displacement of T4 from transthyretin
2797	thyroid hormone	4318		Displacement of T4 from transthyretin
2798	suspected no endocrine effect	4319		No significant displacement of T4 from transthyretin
2799	suspected no endocrine effect	4320		No significant displacement of T4 from transthyretin
2800	suspected no endocrine effect	4321		No significant displacement of T4 from transthyretin
2801	suspected no endocrine effect	4322		No significant displacement of T4 from transthyretin
2802	suspected no endocrine effect	4323		No significant displacement of T4 from transthyretin
2803	suspected no endocrine effect	4324		No significant displacement of T4 from transthyretin
2804	thyroid hormone	4325		Displacement of T4 from transthyretin
2805	thyroid hormone	4326		Displacement of T4 from transthyretin
2806	thyroid hormone	4327		Displacement of T4 from transthyretin
2807	thyroid hormone	4328		Displacement of T4 from transthyretin
2808	thyroid hormone	4329		Displacement of T4 from transthyretin
2809	thyroid hormone	4330		Displacement of T4 from transthyretin
2810	thyroid hormone	4331		Displacement of T4 from transthyretin
2811	thyroid hormone	4332		Displacement of T4 from transthyretin
2812	thyroid hormone	4333		Displacement of T4 from transthyretin
2813	thyroid hormone	4334		Displacement of T4 from transthyretin
2814	thyroid hormone	4335		Displacement of T4 from transthyretin
2815	thyroid hormone	4336		Displacement of T4 from transthyretin
2816	thyroid hormone	4337		Displacement of T4 from transthyretin
2817	suspected no endocrine effect	4338		No significant displacement of T4 from transthyretin
2818	suspected no endocrine effect	4339		No significant displacement of T4 from transthyretin
2819	suspected no endocrine effect	4340		No significant displacement of T4 from transthyretin
2820	suspected no endocrine effect	4341		No significant displacement of T4 from transthyretin
2821	suspected no endocrine effect	4342		No significant displacement of T4 from transthyretin
2822	suspected no endocrine effect	4343		No significant displacement of T4 from transthyretin
2823	suspected no endocrine effect	4344		No significant displacement of T4 from transthyretin
2824	suspected no endocrine effect	4328		Parent PBDE: no binding to transthyretin
2825	suspected no endocrine effect	4329		Parent PBDE: no binding to transthyretin
2826	suspected no endocrine effect	4330		Parent PBDE: no binding to transthyretin
2827	suspected no endocrine effect	4331		Parent PBDE: no binding to transthyretin
2828	suspected no endocrine effect	4332		Parent PBDE: no binding to transthyretin

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
2829	suspected no endocrine effect	4333		Parent PBDE: no binding to transthyretin
2830	suspected no endocrine effect	4334		Parent PBDE: no binding to transthyretin
2831	suspected no endocrine effect	4335		Parent PBDE: no binding to transthyretin
2832	suspected no endocrine effect	4336		Parent PBDE: no binding to transthyretin
2833	suspected no endocrine effect	4337		Parent PBDE: no binding to transthyretin
2834	suspected no endocrine effect	4338		Parent PBDE: no binding to transthyretin
2835	suspected no endocrine effect	4339		Parent PBDE: no binding to transthyretin
2836	suspected no endocrine effect	4340		Parent PBDE: no binding to transthyretin
2837	suspected no endocrine effect	4341		Parent PBDE: no binding to transthyretin
2838	suspected no endocrine effect	4342		Parent PBDE: no binding to transthyretin
2839	suspected no endocrine effect	4343		Parent PBDE: no binding to transthyretin
2840	suspected no endocrine effect	4344		Parent PBDE: no binding to transthyretin
2841	thyroid hormone	4345		Decreased thyroid colloid area
2842	thyroid hormone	4345		Increased thyroid follicular cell height
2843	thyroid hormone	4345		7 days: dose-dependent increase in plamsa T4
2844	thyroid releasing hormone	4345		Dose-dependent decrease in plasma TSH
2845	suspected endocrine effect	4346		Increased hepatic PROD and EROD activity
2846	gonadotropin	4346		100-400 µg/kg: decreased serum LH concentrations
2847	gonadotropin	4346		400 µg/kg: tendency for decreased serum FSH concenrations
2848	thyroid hormone	4346		25-400 µg/kg: decreased serum T4
2849	gonadotropin	4346		Increased pituitary LH and FSH levels
2850	suspected endocrine effect	4347		Increased hepatic PROD and EROD activity
2851	suspected endocrine effect	4348		Increased hepatic PROD and EROD activity
2852	gonadotropin	4347		Decreased serum Lh concentrations
2853	gonadotropin	4348		Decreased serum Lh concentrations
2854	suspected endocrine effect	4347		Decreased serum FSH, TSH and testoteron levels (not significant)
2855	suspected endocrine effect	4348		Decreased serum FSH, TSH and testoteron levels (not significant)
2856	thyroid hormone	4348		Increased serum T4
2857	thyroid hormone	4347		Less dense colloid of the thyroid follicles
2858	estrogen	4349		Induction of vitellogenesis
2859	suspected endocrine effect	4350		Females: smaller mature oocytes and thinner gonadal epithelium
2860	suspected no endocrine effect	4350		Males: not significant decrease in gonadal epithelium thickness
2861	anti-estrogen	4351		EC50 = 0.805 µM: inhibitio of 17-beta-estradiol-dependent VTG synthesis mediated through the AhR
2862	suspected endocrine effect	4351		EC50 = 13.8 nM: increased EROD activity

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
2863	anti-estrogen	4352		EC50 = 4.75 µM: inhibitio of 17-beta-estradiol-dependent VTG synthesis mediated through the AhR
2864	suspected endocrine effect	4352		EC50 = 42 nM: increased EROD activity
2865	suspected no endocrine effect	4353		No induction of EROD activity
2866	suspected no endocrine effect	4353		No effect on 17-beta-estradiol-dependent VTG synthesis
2867	estrogen	4354		Dose-dependent inhibition of tritiated 17-beta-estradiol binding to ER
2868	estrogen	4355		Dose-dependent inhibition of tritiated 17-beta-estradiol binding to ER
2869	estrogen	4356		Dose-dependent inhibition of tritiated 17-beta-estradiol binding to ER
2870	estrogen	4357		Dose-dependent inhibition of tritiated 17-beta-estradiol binding to ER
2871	estrogen	4358		Dose-dependent inhibition of tritiated 17-beta-estradiol binding to ER
2872	estrogen	4359		Dose-dependent induction of VTG synthesis
2873	estrogen	4360		Dose-dependent induction of VTG synthesis
2874	estrogen	4361		Dose-dependent increase in plasma VTG levels
2875	estrogen	4362		25-150 µg/l: dose-dependent increase in plasma VTG levels
2876	estrogen	4370		100% female sex ratio
2877	estrogen	4370		1.66 µg/l: reduced fecundity
2878	suspected endocrine effect	4362		75-150 µg/l: decreased plasma testosterone and cholesterol levels
2879	suspected endocrine effect	4362		25-150 µg/l: decreased plasma pregnenolone levels
2880	suspected endocrine effect	4363		250 µg/kg: increased levels of hydroxylated testosterone metabolites
2881	suspected endocrine effect	4363		500 µg/kg: decreased levels of hydroxylated testosterone metabolites
2882	suspected endocrine effect	4364		356-5700 µg/l:decreased total P450 levels
2883	suspected endocrine effect	4364		570-2850 µg/l: inhibition of testosterone metabolism
2884	retinoid hormone	4365		Dose-dependent acceleration of 3H-retinol metabolism
2885	suspected endocrine effect	4374		Dose-related developmental abnormalities
2891	suspected no endocrine effect	4368		No effect on sex ratio
2892	suspected no endocrine effect	4369		No effect on sex ratio
2893	suspected no endocrine effect	4368		No depreciation in reproductive capability
2894	suspected no endocrine effect	4369		No depreciation in reproductive capability
2895	estrogen	4371		Dose-dependent increase in plasma VTG levels
2896	estrogen	4372		Dose-dependent increase in plasma VTG levels
2897	estrogen	4371		Dose-dependent inhibition of testicular growth
2898	estrogen	4372		Dose-dependent inhibition of testicular growth
2899	corticosteroid	4373		2 days: increased plasma cortisol levels
2900	corticosteroid	4373		7 and 14 days: decrease of plasma cortisol concentrations to basal levels
2901	corticosteroid	4373		30 days: increased plasma cortisol levels

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
2902	corticosteroid	4373		30 days: increased in vitro ACTH-induced cortisol secretion
2903	suspected endocrine effect	4374		Dose-dependent reduction in hatching succes
2904	estrogen	4375		Dose-dependent induction of vitellogenesis
2905	corticosteroid	4376		Increased plasma cortisol levels
2906	suspected endocrine effect	4376		Decreased plasma glucose concentrations
2907	suspected endocrine effect	4376		Increased EROD activity
2908	corticosteroid	4376		Increased in vitro uptake of 3H-cortisol by hepatocytes
2909	corticosteroid	4376		Enhanced in vitro catabolism of 3H-cortisol by hepatocytes
2910	estrogen	4377		70.2-106 µg/l: increased plasma VTG concentrations (not significant)
2911	estrogen	4377		556 µg/l: significant induction of vitellogenesis
2912	suspected endocrine effect	4378		Induction of CYP 1A
2913	suspected endocrine effect	4378		Increased GSI
2914	estrogen	4379		Males: reduced size of secondary sex characteristics
2915	estrogen	4379		Males: proliferation of Sertoli cells and degenerative changes in testes
2916	estrogen	4379		Males: degenerating spermatozoa
2917	estrogen	4379		Females: disturb development of follicles
2918	suspected endocrine effect	4380		Females: increased plasma 17-beta-estradiol and testosterone levels
2919	suspected endocrine effect	4380		Females: premature vitellogenesis
2921	suspected no endocrine effect	4380		Males: no induction of vitellogenesis
2922	estrogen	4381		30 day EC50 for the formation of an oviduct: 63 µg/l
2923	estrogen	4381		90 day EC50 for the formation of an oviduct: 36 µg/l
2924	suspected endocrine effect	4381		Reduced number of PGCs
2925	estrogen	4381		90-256 µg/l: development of ovo-testes and inhibition of spermatogenesis
2926	estrogen	4381		256 µg/l: increased plasma VTG levels
2927	estrogen	4382		1000 µg/l: increased plasma VTG levels
2928	estrogen	4382		1000 µg/l: reduced spermatocrit values
2929	estrogen	4382		Decreased GSI
2930	estrogen	4382		Progressive disappearance of spermatozoa and spermatogenic cysts
2931	estrogen	4382		Increased incidence of fibrosis, vacuolation and atrophy of the germinal epithelium
2932	estrogen	4382		Reduced diameter of seminiferous tubules and occurrence of early ovo-testes
2933	estrogen	4383		0.5-2.5 ng: complete sex-reversal of genetic males to females
2934	suspected no endocrine effect	4383		5 ng: lethal
2935	suspected no endocrine effect	4384		No ER binding
2936	estrogen	4385		80% displacement of [3H]estradiol from ER

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
2937	estrogen	4386		80% displacement of [3H]estradiol from ER
2938	estrogen	4387		75% displacement of [3H]estradiol from ER
2939	estrogen	4388		60% displacement of [3H]estradiol from ER
2940	estrogen	4389		40% displacement of [3H]estradiol from ER
2941	estrogen	4390		50% displacement of [3H]estradiol from ER
2942	estrogen	4391		60% displacement of [3H]estradiol from ER
2943	estrogen	4392		20% displacement of [3H]estradiol from ER
2944	suspected no endocrine effect	4393		Very weak interaction with ER
2945	suspected no endocrine effect	4394		Very weak interaction with ER
2946	suspected no endocrine effect	4395		Weak interaction with ER
2947	estrogen	4396		25% displacement of [3H]estradiol from ER
2948	estrogen	4397		25% displacement of [3H]estradiol from ER
2949	suspected no endocrine effect	4398		No ER binding
2950	suspected no endocrine effect	4399		No ER binding
2951	estrogen	4400		40% displacement of [3H]estradiol from ER
2952	estrogen	4401		60% displacement of [3H]estradiol from ER
2953	suspected no endocrine effect	4384		No CR binding
2954	suspected no endocrine effect	4385		No CR binding
2955	suspected no endocrine effect	4386		No CR binding
2956	suspected no endocrine effect	4387		No CR binding
2957	suspected no endocrine effect	4388		No CR binding
2958	suspected no endocrine effect	4389		No CR binding
2959	suspected no endocrine effect	4390		No CR binding
2960	suspected no endocrine effect	4391		No CR binding
2961	suspected no endocrine effect	4392		No CR binding
2962	suspected no endocrine effect	4392		No CR binding
2963	suspected no endocrine effect	4393		No CR binding
2964	suspected no endocrine effect	4394		No CR binding
2965	suspected no endocrine effect	4395		No CR binding
2966	suspected no endocrine effect	4396		No CR binding
2967	suspected no endocrine effect	4397		No CR binding
2968	suspected no endocrine effect	4398		No CR binding
2969	suspected no endocrine effect	4399		No CR binding
2970	suspected no endocrine effect	4400		No CR binding

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
2971	suspected no endocrine effect	4401		No CR binding
2972	suspected no endocrine effect	4402		No AR binding
2973	suspected no endocrine effect	4403		No AR binding
2974	suspected no endocrine effect	4404		No AR binding
2975	suspected no endocrine effect	4405		No AR binding
2976	suspected no endocrine effect	4406		No AR binding
2977	suspected no endocrine effect	4407		No AR binding
2978	suspected no endocrine effect	4408		No AR binding
2979	suspected no endocrine effect	4409		No AR binding
2980	suspected no endocrine effect	4410		No AR binding
2981	suspected no endocrine effect	4411		No AR binding
2982	suspected no endocrine effect	4412		No AR binding
2983	suspected no endocrine effect	4413		No AR binding
2984	suspected no endocrine effect	4414		No AR binding
2985	suspected no endocrine effect	4415		No AR binding
2986	suspected no endocrine effect	4416		No AR binding
2987	suspected no endocrine effect	4417		No AR binding
2988	suspected no endocrine effect	4418		No AR binding
2989	suspected no endocrine effect	4419		No AR binding
2990	estrogen	4420		Increased plasma VTG levels
2991	estrogen	4420		Development of ovotestis
2992	estrogen	4421		Inhibition of [3H]estradiol binding to ER
2993	estrogen	4422		Inhibition of [3H]estradiol binding to ER
2994	estrogen	4423		Inhibition of [3H]estradiol binding to ER
2995	estrogen	4424		Inhibition of [3H]estradiol binding to ER
2996	estrogen	4425		Inhibition of [3H]estradiol binding to ER
2997	estrogen	4426		Inhibition of [3H]estradiol binding to ER
2998	estrogen	4427		Dose-dependent inhibition of [3H]estradiol binding to ER
2999	suspected endocrine effect	4428		Biphasic response in uterine wet weight (low dose: decrease; high dose: increase)
3000	suspected endocrine effect	4428		Dose-dependent increase in HSI
3001	suspected endocrine effect	4428		Increased EROD, BROD and MROD activity
3002	suspected endocrine effect	4428		Induction of CYP1A1
3003	steroid	4428		Decreased plasma 17-beta-estradiol concentrations
3004	steroid	4428		Biphasic effect on plasma testosterone levels (middle dose: decrease; high dose: increase)

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
3005	estrogen	4429		Dose-dependent induction of ERalpha-mediated gene expression
3006	estrogen	4430		Dose-dependent induction of ERalpha-mediated gene expression
3007	estrogen	4431		Dose-dependent induction of ERalpha-mediated gene expression
3008	estrogen	4432		Dose-dependent induction of ERalpha-mediated gene expression
3009	estrogen	4433		Dose-dependent induction of ERalpha-mediated gene expression
3010	estrogen	4434		Dose-dependent induction of ERalpha- and ERbeta-mediated gene expression
3011	estrogen	4435		Dose-dependent induction of ERalpha- and ERbeta-mediated gene expression
3012	estrogen	4436		Dose-dependent induction of ERalpha- and ERbeta-mediated gene expression
3013	estrogen	4437		Dose-dependent induction of ERalpha- and ERbeta-mediated gene expression
3014	anti-estrogen	4438		Inhibition of ERalpha- and ERbeta-mediated gene expression
3015	estrogen	4439		Influent: estrogenic activity equivalent to 60-100 pM 17-beta-estradiol
3016	estrogen	4440		Influent: estrogenic activity equivalent to 60-100 pM 17-beta-estradiol
3017	estrogen	4439		Effluent: estrogenic activity equivalent to 0.24-1 nM 17-beta-estradiol
3018	estrogen	4440		Effluent: estrogenic activity equivalent to 0.24-1 nM 17-beta-estradiol
3019	androgen	4441		Increased inicidence of imposex
3020	juvenile hormone	4442		Slight delay in moulting
3021	juvenile hormone	4443		Slight delay in moulting
3022	juvenile hormone	4444		Slight delay in moulting
3023	juvenile hormone	4445		Slight delay in moulting
3024	juvenile hormone	4446		Slight delay in moulting
3025	juvenile hormone	4447		Blocked metamorphosis
3026	juvenile hormone	4447		Some metathelic insects with deformed wings and no abdominal glands
3027	juvenile hormone	4448		Blocked metamorphosis
3028	juvenile hormone	4448		Some metathelic insects with deformed wings and no abdominal glands
3029	juvenile hormone	4449		Blocked metamorphosis
3030	juvenile hormone	4449		Some metathelic insects with deformed wings and no abdominal glands
3031	juvenile hormone	4450		Blocked metamorphosis
3032	juvenile hormone	4450		Some metathelic insects with deformed wings and no abdominal glands
3033	juvenile hormone	4451		Blocked metamorphosis
3034	juvenile hormone	4451		Some metathelic insects with deformed wings and no abdominal glands
3035	suspected endocrine effect	4452		Positive correlation between Hg-concentration and subfertility
3036	estrogen	4453		Induction of cell proliferation
3037	estrogen	4453		Additivity in combination with 4-tert-octylphenol (0.05 µM) and technical 4-nonylphenol (0.05 µM)
3038	estrogen	4454		Induction of cell proliferation

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
3039	estrogen	4454		Additivity in combination with bisphenol A (0.05 µM) and technical 4-nonylphenol (0.05 µM)
3040	estrogen	4455		Induction of cell proliferation
3041	estrogen	4455		Additivity in combination with bisphenol A (0.05 µM) and bisphenol A (0.05 µM)
3042	estrogen	4453		Partial additivity in combination with benzyl-n-butylphtalate (2 µM) and 4-hydroxybiphenyl (1 µM)
3043	estrogen	4456		Induction of cell proliferation
3044	estrogen	4456		Partial additivity in combination with bisphenol A (0.05 µM) and 4-hydroxybiphenyl (1 µM)
3045	estrogen	4457		Induction of cell proliferation
3046	estrogen	4457		Partial additivity in combination with bisphenol A (0.05 µM) and benzyl-n-butylphtalate (2 µM)
3047	estrogen	4458		Induction of cell proliferation
3048	estrogen	4458		17-beta-estradiol equivalent concentrations: 2.5-25 ng/l
3049	estrogen	4459		Induction of vitellogenesis
3050	suspected no endocrine effect	4460		No induction of vitellogenesis
3051	suspected endocrine effect	4462		Possitive correlation between concentration levels and decreased female birth weights
3052	suspected endocrine effect	4463		Possitive correlation between concentration levels and decreased female birth weights
3053	estrogen	4464		Induction of vitellogenesis
3054	estrogen	4465		Induction of vitellogenesis
3055	estrogen	4466		Induction of vitellogenesis
3056	estrogen	4467		Induction of vitellogenesis
3057	suspected no endocrine effect	4468		No induction of vitellogenesis
3058	suspected no endocrine effect	4469		No induction of vitellogenesis
3059	suspected no endocrine effect	4470		No induction of vitellogenesis
3060	suspected no endocrine effect	4471		No induction of vitellogenesis
3061	estrogen	4472		Induction of hER-mediated transactivation
3062	estrogen	4473		Induction of hER-mediated transactivation
3063	estrogen	4474		Induction of hER-mediated transactivation
3064	estrogen	4475		Inhibition of [3H]estradiol binding to hER
3065	estrogen	4476		Inhibition of [3H]-estradiol binding to hER
3066	estrogen	4477		Inhibition of [3H]estradiol binding to hER
3067	suspected no endocrine effect	4478		No significant induction of hER-mediated transactivation
3068	suspected no endocrine effect	4479		No significant induction of hER-mediated transactivation
3069	suspected no endocrine effect	4480		No significant induction of hER-mediated transactivation
3070	suspected no endocrine effect	4481		No hER binding
3071	suspected no endocrine effect	4482		No hER binding
3072	suspected no endocrine effect	4483		No hER binding

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
3073	estrogen	4484		Induction of hER-mediated transactivation
3074	estrogen	4485		Induction of hER-mediated transactivation
3075	estrogen	4486		Induction of hER-mediated transactivation
3076	estrogen	4487		Induction of hER-mediated transactivation
3077	estrogen	4488		Induction of hER-mediated transactivation
3078	estrogen	4489		Induction of hER-mediated transactivation
3079	estrogen	4490		Induction of hER-mediated transactivation
3080	estrogen	4491		Induction of hER-mediated transactivation
3081	estrogen	4492		Induction of VTG mRNA
3082	estrogen	4493		Induction of VTG mRNA
3083	estrogen	4494		Induction of VTG mRNA
3084	estrogen	4495		Increased number of female phenotypes
3085	estrogen	4496		Increased number of female phenotypes
3086	estrogen	4497		Increased number of female phenotypes
3087	estrogen	4498		Increased number of female phenotypes
3088	estrogen	4499		Increased number of female phenotypes
3089	estrogen	4500		Males and females: increased VTG synthesis
3090	estrogen	4500		Females: arrested development at the early blastula stage of produced eggs
3091	estrogen	4501		Development of ovotestis
3092	estrogen	4502		Development of ovotestis
3093	estrogen	4502		Dose-dependent increase of persisting Müllerian ducts in males
3094	estrogen	4502		Dose-dependent increase of malformations of the Müllerian ducts in females
3095	estrogen	4501		19-170 ng/g: dose-dependent increase of persisting Müllerian ducts in males
3096	estrogen	4501		19-170 ng/g: dose-dependent increase of malformations of the Müllerian ducts in females
3097	estrogen	4503		Dose-dependent inhibition of [3H]estradiol binding to ER
3098	estrogen	4504		Dose-dependent inhibition of [3H]estradiol binding to ER
3099	estrogen	4503		RBA to 17-beta-estradiol assessed at IC50: 0.0067
3100	estrogen	4504		RBA to 17-beta-estradiol assessed: 0.0033
3101	suspected no endocrine effect	4505		No significant ER binding
3102	estrogen	4506		Increased plasma zona radiata protein levels
3103	estrogen	4507		Increased plasma zona radiata protein levels
3104	estrogen	4506		10 mg/kg: increased plasma VTG levels
3105	estrogen	4507		10 mg/kg: increased plasma VTG levels
3106	suspected no endocrine effect	4508		No induction of vitellogenesis

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
3107	suspected no endocrine effect	4508		No significant increase in plasma zona radiata protein levels
3108	estrogen	4509		Time- and dose-dependent induction of ER mRNA, VTG mRNA and zona radiata protein mRNA
3109	estrogen	4510		Dose-dependent induction of cell proliferation (RPE > 70%)
3110	estrogen	4510		EEQ: 58-70 ng/l
3111	estrogen	4510		Quantified phenolic compounds: 0.72-0.83% of total estrogenic activity
3112	estrogen	4511		Dose-dependent induction of cell proliferation (RPE > 70%)
3113	estrogen	4511		EEQ: 58-70 ng/l
3114	estrogen	4511		Quantified phenolic compounds: 0.72-0.83% of total estrogenic activity
3115	estrogen	4512		Dose-dependent induction of cell proliferation (RPE > 70%)
3116	estrogen	4512		EEQ: 58-70 ng/l
3117	estrogen	4512		Quantified phenolic compounds: 0.72-0.83% of total estrogenic activity
3118	estrogen	4513		Dose-dependent induction of cell proliferation (RPE > 70%)
3119	estrogen	4513		EEQ: 58-70 ng/l
3120	estrogen	4513		Quantified phenolic compounds: 0.72-0.83% of total estrogenic activity
3121	estrogen	4514		Dose-dependent induction of cell proliferation (RPE > 70%)
3122	estrogen	4514		EEQ: 58-70 ng/l
3123	estrogen	4514		Quantified phenolic compounds: 0.72-0.83% of total estrogenic activity
3124	estrogen	4515		Dose-dependent induction of cell proliferation (RPE > 70%)
3125	estrogen	4515		EEQ: 58-70 ng/l
3126	estrogen	4515		Quantified phenolic compounds: 0.72-0.83% of total estrogenic activity
3127	estrogen	4516		Dose-dependent induction of cell proliferation (RPE: 40%)
3128	estrogen	4516		EEQ: 6 ng/l
3129	estrogen	4516		Quantified phenolic compounds: 1.4-4.3% of total estrogenic activity
3130	estrogen	4517		Dose-dependent induction of cell proliferation (RPE: 40%)
3131	estrogen	4517		EEQ: 6 ng/l
3132	estrogen	4517		Quantified phenolic compounds: 1.4-4.3% of total estrogenic activity
3133	estrogen	4518		Dose-dependent induction of cell proliferation (RPE: 40%)
3134	estrogen	4518		EEQ: 6 ng/l
3135	estrogen	4518		Quantified phenolic compounds: 1.4-4.3% of total estrogenic activity
3136	suspected endocrine effect	4522		Developmental delays
3137	suspected endocrine effect	4523		Induction of CYP1A1
3138	suspected endocrine effect	4524		Increased number of female phenotypes
3139	estrogen	4526		Increased number of female phenotypes
3140	suspected endocrine effect	4526		Increased number of female phenotypes

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
3141	suspected endocrine effect	4527		Increased number of female phenotypes
3142	suspected endocrine effect	4528		Increased number of female phenotypes
3143	suspected no endocrine effect	4529		No effect on sex ratio
3144	estrogen	4530		Induction of cell proliferation
3145	estrogen	4530		RPE: 78%
3146	estrogen	4531		Induction of cell proliferation
3147	estrogen	4531		RPE: 96.8%
3148	estrogen	4532		Induction of cell proliferation
3149	estrogen	4532		RPE: 104.8%
3150	estrogen	4533		Induction of cell proliferation
3151	estrogen	4533		RPE: 97.4%
3152	estrogen	4534		Induction of cell proliferation
3153	estrogen	4534		RPE: 92.2%
3154	estrogen	4535		Induction of cell proliferation
3155	estrogen	4535		RPE: 70.9%
3156	estrogen	4536		Induction of cell proliferation
3157	estrogen	4536		RPE: 80%
3158	estrogen	4537		Induction of cell proliferation
3159	estrogen	4537		RPE: 62.2%
3160	estrogen	4538		Induction of cell proliferation
3161	estrogen	4538		RPE: 30.6%
3162	estrogen	4539		Induction of cell proliferation
3163	estrogen	4539		RPE: 50.2%
3164	estrogen	4540		Induction of cell proliferation
3165	estrogen	4540		RPE: 43.7%
3166	estrogen	4541		Induction of cell proliferation
3167	estrogen	4541		RPE: 25%
3168	suspected no endocrine effect	4542		No estrogenic activity
3169	suspected no endocrine effect	4543		No estrogenic activity
3170	suspected no endocrine effect	4544		No estrogenic activity
3171	suspected no endocrine effect	4545		Highly cytotoxic
3172	gonadotropin	4546		Increased serum FSH levels
3173	suspected no endocrine effect	4546		No effect on serum LH and testosterone levels and testosterone/LH ratio
3174	suspected no endocrine effect	4546		No estrogenic, anti-estrogenic and anti-androgenic activity

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
3175	androgen	4547		Competitve inhibition of [3H]R1881 binding to AR
3176	androgen	4548		Competitve inhibition of [3H]R1881 binding to AR
3177	thyroid hormone	4549		Decreased serum T4 levels on days 2, 3, 4 and 7 post treatment
3178	thyroid hormone	4549		Decreased serum T3 levels (37%) on day 7 post treatment
3179	thyroid hormone	4550		Decreased serum T4 levels on days 2, 3, 4 and 7 post treatment
3180	thyroid releasing hormone	4549		Increased serum TSH on days 3 or 4 post treatment
3181	suspected endocrine effect	4549		Increased hepatic Cyt P450 content and EROD and PROD activity
3182	thyroid hormone	4550		Increased serum T3 levels (35%) on days 3 and 4 post treatment
3183	suspected endocrine effect	4550		Increased hepatic Cyt P450 content and PROD activity
3184	thyroid hormone	4551		Decreased serum T4 levels on days 2, 3, 4 and 7 post treatment
3185	thyroid releasing hormone	4551		Increased serum TSH on days 3 or 4 post treatment
3186	suspected endocrine effect	4551		Increased hepatic Cyt P450 content and EROD and PROD activity
3187	thyroid hormone	4552		Decreased serum T4 levels on days 2, 3, 4 and 7 post treatment
3188	thyroid hormone	4553		Decreased serum T4 levels on days 2, 3, 4 and 7 post treatment
3189	thyroid releasing hormone	4552		Increased serum TSH on days 3 and 4 post treatment
3190	suspected endocrine effect	4552		Increased thyroid weight
3191	suspected endocrine effect	4552		Increased hepatic Cyt P450 content and EROD and PROD activity
3192	thyroid hormone	4553		Increased serum T3 levels (38%) on days 3 and 4 post treatment
3193	thyroid hormone	4554		Decreased serum T4 levels on days 2, 3, 4 and 7 post treatment
3194	thyroid releasing hormone	4554		Increased serum TSH on days 3 or 4 post treatment
3195	suspected endocrine effect	4554		Increased hepatic Cyt P450 content and EROD and PROD activity
3196	thyroid hormone	4555		Decreased serum T4 levels on days 2, 3, 4 and 7 post treatment
3197	thyroid hormone	4555		Increased serum T3 levels at any time point
3198	suspected endocrine effect	4555		Increased thyroid weight
3199	suspected endocrine effect	4555		Increased hepatic Cyt P450 content and PROD activity
3200	thyroid hormone	4556		Decreased serum T4 levels on days 2, 3, 4 and 7 post treatment
3201	thyroid releasing hormone	4556		Increased serum TSH on days 3 or 4 post treatment
3202	suspected endocrine effect	4556		Increased hepatic Cyt P450 content and PROD activity
3203	thyroid hormone	4557		Decreased serum T4 levels on days 2, 3, 4 and 7 post treatment
3204	thyroid hormone	4557		Decreased serum T3 levels (37%) on day 7 post treatment
3205	thyroid releasing hormone	4557		Increased serum TSH on days 3 or 4 post treatment
3206	suspected endocrine effect	4558		Increased risk for testicular cancer
3207	estrogen	4559		Induction of ER-mediated transcription
3208	estrogen	4560		Induction of ER-mediated transcription

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
3209	estrogen	4561		Induction of ER-mediated transcription
3210	estrogen	4562		Induction of ER-mediated transcription
3211	estrogen	4563		Induction of ER-mediated transcription
3212	estrogen	4564		Induction of ER-mediated transcription
3213	estrogen	4565		Induction of ER-mediated transcription
3214	estrogen	4566		Induction of ER-mediated transcription
3215	estrogen	4567		Induction of ER-mediated transcription
3216	suspected no endocrine effect	4568		No estrogenic activity
3217	suspected no endocrine effect	4569		No estrogenic activity
3218	suspected no endocrine effect	4570		No estrogenic activity
3219	suspected no endocrine effect	4571		No estrogenic activity
3220	suspected no endocrine effect	4572		No estrogenic activity
3221	suspected no endocrine effect	4573		No estrogenic activity
3222	suspected no endocrine effect	4574		No estrogenic activity
3223	suspected no endocrine effect	4575		No estrogenic activity
3224	suspected no endocrine effect	4576		No estrogenic activity
3225	suspected no endocrine effect	4577		No estrogenic activity
3226	suspected no endocrine effect	4578		No estrogenic activity
3227	suspected no endocrine effect	4579		No estrogenic activity
3228	suspected no endocrine effect	4580		No estrogenic activity
3229	suspected no endocrine effect	4581		No estrogenic activity
3230	suspected no endocrine effect	4582		No estrogenic activity
3231	suspected no endocrine effect	4583		No estrogenic activity
3232	estrogen	4584		Induction of ER-mediated transcription
3233	anti-estrogen	4585		Dose-dependent inhibition of 17-beta-estradiol induced cell proliferation
3234	anti-estrogen	4586		Dose-dependent inhibition of 17-beta-estradiol induced cell proliferation
3235	estrogen	4587		5 µM: minor ER-mediated induction of cell proliferation
3236	estrogen	4588		5 µM: minor ER-mediated induction of cell proliferation
3237	suspected no endocrine effect	4587		No antiestrogenic activity
3238	suspected no endocrine effect	4588		No antiestrogenic activity
3239	suspected no endocrine effect	4589		No (anti)estrogenic activity
3240	suspected no endocrine effect	4590		No antiestrogenic activity
3241	estrogen	4590		5 µM: ER-mediated induction of cell proliferation
3242	estrogen	4591		5 µM: ER-mediated induction of cell proliferation

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
3243	estrogen	4592		5 µM: ER-mediated induction of cell proliferation
3244	suspected no endocrine effect	4591		No antiestrogenic activity
3245	suspected no endocrine effect	4592		No antiestrogenic activity
3246	suspected no endocrine effect	4593		No antiestrogenic activity
3247	suspected no endocrine effect	4594		No antiestrogenic activity
3248	estrogen	4593		5 µM: ER-mediated induction of cell proliferation
3249	estrogen	4594		5 µM: ER-mediated induction of cell proliferation
3250	estrogen	4595		5 µM: ER-mediated induction of cell proliferation
3251	estrogen	4596		5 µM: ER-mediated induction of cell proliferation
3252	suspected no endocrine effect	4595		No antiestrogenic activity
3253	suspected no endocrine effect	4596		No antiestrogenic activity
3254	anti-estrogen	4597		Inhibition of 17-beta-estradiol induced cell proliferation
3255	estrogen	4598		ER-mediated induction of cell proliferation
3256	suspected endocrine effect	4599		Decreased serum 17-beta-estradiol concentrations
3257	suspected endocrine effect	4599		Decreased egg laying; small eggs with thin shell
3258	suspected endocrine effect	4599		Nuerological dysfunction
3259	thyroid hormone	4600		Significant negative correlations between total TEQ intake and serum T3 and T4 levels
3260	estrogen	4601		Significantly decreased number of eggs and hatchings
3261	estrogen	4461		Significantly decreased number of eggs and hatchings
3262	estrogen	4602		Decreased number of hatchings
3263	suspected no endocrine effect	4603		No effect on the number of eggs and hatchings
3264	suspected endocrine effect	4604		Reduced number of eggs and larvae
3265	suspected endocrine effect	4604		Larvae: reduced body weight and increased yolk-sac volume
3266	retinoid hormone	4605		Dose-dependent increase in renal retinol levels
3267	thyroid hormone	4605		Increased plasma total T4 levels
3268	thyroid hormone	4605		Increased plasma total T3 levels at day 2
3269	suspected endocrine effect	4605		100-500 mg: increased EROD activity
3270	androgen	4606		Development of imposex
3271	androgen	4607		Development of imposex
3272	androgen	4608		Development of imposex
3273	estrogen	4609		Upregulation of hepatic ER
3274	estrogen	4609		Induction of zonaradiata proteins
3275	estrogen	4609		Additivity in combination with butylbenzylphtalate or 17-beta-estradiol
3276	suspected endocrine effect	4610		Decreased plasma zona radiata proteins levels

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
3277	suspected endocrine effect	4610		Additivity in combination with octylphenol
3278	estrogen	4611		Male and female: increased plasma VTG levels
3279	suspected endocrine effect	4611		Males: testicular abnormalities and increased HSI
3280	androgen	4612		Development of imposex
3281	suspected endocrine effect	4613		Increased EROD activity
3282	suspected endocrine effect	4613		Negative correlations between female EROD and GSI and CF
3283	androgen	4614		Development of imposex
3284	androgen	4615		Development of imposex
3285	androgen	4616		Dose-dependent decrease in the aromatization of testosterone
3286	androgen	4616		Increased formation of 6-alpha-hydroxytestosterone
3287	androgen	4616		Increased tissue testosterone levels
3288	androgen	4617		Reduced testosterone metabolism rate
3289	androgen	4617		Decreased formation of androstenedione and increased formation of hydroxylated testosterone
3290	suspected endocrine effect	4619		Reduction in the total metabolism of testosterone
3291	suspected endocrine effect	4619		Altered testosterone metabolite profile
3292	suspected endocrine effect	4618		Increased testosterone levels
3293	suspected endocrine effect	4618		Decreased aromatization of testosterone to estrone and estradiol
3294	estrogen	4620		Females: increased hepatic ER mRNA levels
3295	suspected no endocrine effect	4620		Embryos: high mortality before hatching
3296	suspected endocrine effect	4620		Embryos: posterior malformations and edemas
3297	estrogen	4621		Females: increased hepatic ER mRNA levels
3298	suspected no endocrine effect	4620		Embryos: high mortality before hatching
3299	suspected endocrine effect	4621		Embryos: posterior malformations and edemas
3300	suspected endocrine effect	4622		Embryos: high mortality due to impaired hatching
3301	suspected endocrine effect	4623		Embryos: posterior malformations and edemas
3302	suspected endocrine effect	4624		Embryos: retarted growth and anterior malformations
3303	estrogen	4625		100000-fold increases in plasma VTG levels
3304	estrogen	4626		100000-fold increases in plasma VTG levels
3305	estrogen	4627		100000-fold increases in plasma VTG levels
3306	estrogen	4628		Approximately 300-fold increases in plasma VTG levels
3307	estrogen	4629		Approximately 300-fold increases in plasma VTG levels
3308	suspected no endocrine effect	4626		Increased HSI
3309	suspected no endocrine effect	4627		Increased HSI
3310	suspected no endocrine effect	4629		Increased HSI

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
3311	estrogen	4630		Weak induction of vitellogenesis (about 3-fold)
3312	suspected no endocrine effect	4631		No induction of vitellogenesis
3313	estrogen	4632		Increased plasma basal and LHRH analog-induced gonadotropin levels
3314	estrogen	4633		Increased plasma basal gonadotropin levels
3315	estrogen	4634		Increased plasma basal gonadotropin levels
3316	estrogen	4635		Increased plasma basal gonadotropin levels
3317	estrogen	4634		0.1 µg: increased ovarian growth
3318	estrogen	4636		Increased serum VTG concentrations
3319	estrogen	4636		Development of ovotestes
3320	estrogen	4637		Induction of zonagenesis and vitellogenesis
3321	progestogen	4638		Inhibition of 20-beta-S binding to its receptor
3322	progestogen	4639		Inhibition of 20-beta-S binding to its receptor
3323	progestogen	4640		Inhibition of 20-beta-S binding to its receptor
3324	progestogen	4641		Inhibition of 20-beta-S binding to its receptor
3325	suspected endocrine effect	4642		Decreased motility, velocity and angular velocity
3326	steroid	4643		Reduced testosterone and 11-ketotestosterone production by testes
3327	steroid	4644		Decreased plasma 17-beta-estradiol and testosterone levels in the period of gonadal development
3328	steroid	4645		Decreased plasma 17-beta-estradiol and testosterone levels in the period of gonadal development
3329	thyroid hormone	4646		Increased plasma T3 levels
3330	thyroid hormone	4646		Decreased plasma T4 levels
3331	anti-estrogen	4646		Females: some decreases in plasma VTG levels
3332	gonadotropin	4647		Decreased pulse frequency and mean halfilife of LH
3333	gonadotropin	4648		Decreased mean serum levels and pulse duration of LH
3334	gonadotropin	4648		Increased LH pulse frequency
3335	estrogen	4649		RBA to [3H]-estradiol: 70%
3336	estrogen	4650		RBA to [3H]-estradiol: 0.169%
3337	estrogen	4651		RBA to [3H]estradiol: 0.04%
3338	estrogen	4652		RBA to [3H]-estradiol < 0.004%
3339	suspected endocrine effect	4653		Male offspring: altered territorial behaviour
3340	suspected endocrine effect	4654		Male offspring: altered territorial behaviour
3341	suspected endocrine effect	4655		Male offspring: altered territorial behaviour
3342	suspected endocrine effect	4656		Inhibition of chitobiase activity in the epidermis and hepatopancreas
3343	suspected endocrine effect	4657		Inhibition of epidermal chitobiase activity
3344	suspected endocrine effect	4658		Inhibition of chitobiase activity in the epidermis and hepatopancreas after 3 days

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
3345	suspected endocrine effect	4658		2 mg/l: inhibition of epidermal chitobiase activity after 7 days
3346	suspected endocrine effect	4659		Induction of hepatic EROD activity
3347	estrogen	4660		Induction of vitellogenesis
3348	estrogen	4661		Induction of vitellogenesis
3349	estrogen	4662		Increased serum VTG levels
3350	estrogen	4662		Decreased serum testosterone levels
3351	estrogen	4663		Decreased serum testosterone levels
3352	suspected endocrine effect	4664		Sex-specific effects on nonsocial behavior
3353	suspected endocrine effect	4665		Sex-specific effects on nonsocial behavior
3354	suspected endocrine effect	4666		Increased aggressive behavior to a same-sex conspecific
3355	suspected endocrine effect	4666		0.018 ng: enlarged preputial glands in males
3356	suspected endocrine effect	4667		Smaller testes
3357	estrogen	4668		Dose-dependent induction of ER-mediated gene transcription
3358	estrogen	4669		Induction of ER-mediated gene transcription
3359	estrogen	4670		Induction of ER-mediated gene transcription
3360	estrogen	4671		Induction of ER-mediated gene transcription
3361	estrogen	4672		Induction of VTG mRNA expression
3362	estrogen	4673		Dose-dependent induction of ER-mediated gene transcription
3363	estrogen	4674		Dose-dependent induction of ER-mediated gene transcription
3364	estrogen	4675		Very weak induction of ER-mediated gene transcription
3365	estrogen	4676		Weak induction of ER-mediated gene transcription
3366	suspected no endocrine effect	4677		No significant induction of ER-mediated gene transcription
3367	estrogen	4678		Dose-dependent induction of ER-mediated gene transcription
3368	estrogen	4679		Dose-dependent induction of ER-mediated gene transcription
3369	estrogen	4680		Dose-dependent induction of ER-mediated gene transcription
3370	estrogen	4681		Dose-dependent induction of ER-mediated gene transcription
3371	estrogen	4682		Induction of VTG mRNA expression
3372	estrogen	4683		Weak induction of VTG mRNA expression
3373	estrogen	4684		Weak induction of VTG mRNA expression
3374	estrogen	4685		Induction of VTG mRNA expression
3375	estrogen	4686		Induction of VTG mRNA expression
3376	estrogen	4687		Induction of VTG mRNA expression
3377	estrogen	4688		Induction of VTG mRNA expression
3378	suspected no endocrine effect	4689		No significant induction of VTG mRNA

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
3379	suspected no endocrine effect	4690		No induction of VTG mRNA
3380	anti-estrogen	4691		Inhibition of 17beta-estradiol-induced gene expression
3381	anti-estrogen	4692		Inhibition of 17beta-estradiol-induced gene expression
3382	anti-estrogen	4693		Inhibition of 17beta-estradiol-induced gene expression
3383	anti-estrogen	4694		Inhibition of 17beta-estradiol-induced gene expression
3384	anti-estrogen	4695		Inhibition of 17beta-estradiol-induced gene expression
3385	anti-estrogen	4696		Inhibition of 17beta-estradiol-induced gene expression
3386	anti-estrogen	4697		Inhibition of 17beta-estradiol-induced gene expression
3387	anti-estrogen	4698		Inhibition of 17beta-estradiol-induced gene expression
3388	anti-estrogen	4699		Inhibition of 17beta-estradiol-induced gene expression
3389	anti-estrogen	4700		Inhibition of 17beta-estradiol-induced gene expression
3390	anti-estrogen	4701		Inhibition of 17beta-estradiol-induced gene expression
3391	anti-estrogen	4702		Inhibition of 17beta-estradiol-induced gene expression
3392	anti-estrogen	4703		Inhibition of 17beta-estradiol-induced gene expression
3393	anti-estrogen	4704		Inhibition of 17beta-estradiol-induced gene expression
3394	estrogen	4694		Induction of estrogen-responsive gene expression
3395	estrogen	4695		Induction of estrogen-responsive gene expression
3396	estrogen	4696		Induction of estrogen-responsive gene expression
3397	progestogen	4705		Inhibition of progesterone-induced gene expression
3398	progestogen	4706		Inhibition of progesterone-induced gene expression
3399	progestogen	4707		Inhibition of progesterone-induced gene expression
3400	progestogen	4708		Inhibition of progesterone-induced gene expression
3401	progestogen	4709		Inhibition of progesterone-induced gene expression
3402	progestogen	4710		Inhibition of progesterone-induced gene expression
3403	progestogen	4711		Inhibition of progesterone-induced gene expression
3404	progestogen	4705		Induction of progesterone-responsive gene expression
3405	progestogen	4706		Induction of progesterone-responsive gene expression
3406	progestogen	4707		Induction of progesterone-responsive gene expression
3407	progestogen	4708		Induction of progesterone-responsive gene expression
3408	progestogen	4709		Induction of progesterone-responsive gene expression
3409	progestogen	4710		Induction of progesterone-responsive gene expression
3410	progestogen	4711		Induction of progesterone-responsive gene expression
3411	estrogen	4712		Inhibition of [3H]17beta-estradiol binding to hER
3412	estrogen	4713		Inhibition of [3H]17beta-estradiol binding to hER

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
3413	estrogen	4714		Inhibition of [3H]17beta-estradiol binding to hER
3414	estrogen	4715		Inhibition of [3H]17beta-estradiol binding to hER
3415	estrogen	4716		Inhibition of [3H]17beta-estradiol binding to hER
3416	estrogen	4717		Inhibition of [3H]17beta-estradiol binding to hER
3417	progestogen	4718		Inhibition of [3H]R5020 binding to hPR
3418	progestogen	4719		Inhibition of [3H]R5020 binding to hPR
3419	progestogen	4720		Inhibition of [3H]R5020 binding to hPR
3420	progestogen	4721		Inhibition of [3H]R5020 binding to hPR
3421	progestogen	4722		Inhibition of [3H]R5020 binding to hPR
3422	progestogen	4723		Inhibition of [3H]R5020 binding to hPR
3423	progestogen	4724		Inhibition of [3H]R5020 binding to hPR
3424	estrogen	4725		Induction of PRL gene expression
3425	suspected endocrine effect	4726		Decreased plasma free testosterone levels
3426	suspected endocrine effect	4726		Multinucleated giant cells in the seminiferous tubules of the testis
3427	thyroid releasing hormone	4727		Increased TRH content in Islets of Langerhans
3428	thyroid releasing hormone	4727		Increased basal and 80 mM isotonic ethanol-induced TRH secretion from Islets of Langerhans
3429	thyroid releasing hormone	4728		Dose-dependent stimulation of TRH release
3430	insulin	4728		80-160 mM: dose-dependent stimulation of insulin release
3431	suspected endocrine effect	4729		Increased acrosome reaction
3432	suspected endocrine effect	4729		Reduced sperm-oocyte penetration
3433	suspected endocrine effect	4730		Reduced epididymal sperm counts, sperm motility and sperm quality
3434	suspected endocrine effect	4730		Reduced in vitro sperm-oocyte penetration
3435	suspected endocrine effect	4730		Tail-less sperm heads
3436	corticosteroid	4731		Decreased affinity of the glucocorticoid for its receptor
3437	corticosteroid	4732		Reduced glucocorticoid-regulated gene expression
3438	corticosteroid			
3439	suspected endocrine effect	4731		48% reduction in cytosolic PKC activity
3440	estrogen	4733		Induction of cell proliferation
3441	estrogen	4733		100-1000 µM: cytotoxicity
3442	estrogen	4734		Induction of cell proliferation
3443	estrogen	4735		Induction of cell proliferation
3444	estrogen	4733		Additivity in combination with T2 or T12
3445	estrogen	4734		Additivity in combination with technical toxaphene or T12
3446	estrogen	4735		Additivity in combination with T2 or technical toxaphene

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
3447	suspected no endocrine effect	4736		No (anti-)estrogenic activity
3448	suspected no endocrine effect	4737		No (anti-)estrogenic activity
3449	suspected no endocrine effect	4738		No (anti-)estrogenic activity
3450	suspected no endocrine effect	4739		No (anti-)estrogenic activity
3451	suspected no endocrine effect	4740		No (anti-)estrogenic activity
3452	suspected no endocrine effect	4741		No (anti-)estrogenic activity
3453	anti-estrogen	4742		Inhibition of the estrogen-responsive production of focu
3454	anti-estrogen	4743		Inhibition of the estrogen-responsive production of focu
3455	anti-estrogen	4744		Inhibition of the estrogen-responsive production of focu
3456	anti-estrogen	4745		Inhibition of the estrogen-responsive production of focu
3457	anti-estrogen	4746		Inhibition of the estrogen-responsive production of focu
3458	anti-estrogen	4747		Inhibition of the estrogen-responsive production of focu
3459	anti-estrogen	4748		Inhibition of the estrogen-responsive production of focu
3460	anti-estrogen	4749		Inhibition of the estrogen-responsive production of focu
3461	anti-estrogen	4750		Inhibition of [3H]17-beta-estradiol binding to ER
3462	anti-estrogen	4751		Inhibition of [3H]17-beta-estradiol binding to ER
3463	anti-estrogen	4752		Inhibition of [3H]17-beta-estradiol binding to ER
3464	anti-estrogen	4753		Inhibition of [3H]17-beta-estradiol binding to ER
3465	anti-estrogen	4754		Inhibition of [3H]17-beta-estradiol binding to ER
3466	anti-estrogen	4755		Inhibition of [3H]17-beta-estradiol binding to ER
3467	anti-estrogen	4756		Inhibition of [3H]17-beta-estradiol binding to ER
3468	anti-estrogen	4758		Inhibition of [3H]17-beta-estradiol binding to ER
3469	anti-estrogen	4759		Increased metabolism of 17-beta-estradiol
3470	anti-estrogen	4760		Increased metabolism of 17-beta-estradiol
3471	anti-estrogen	4761		Increased metabolism of 17-beta-estradiol
3472	anti-estrogen	4762		Increased metabolism of 17-beta-estradiol
3473	anti-androgen	4763		Inhibition of hAR transactivation by R1881
3474	anti-androgen	4764		Inhibition of hAR transactivation by R1881
3475	anti-androgen	4765		Inhibition of hAR transactivation by R1881
3476	anti-androgen	4766		Inhibition of hAR transactivation by R1881
3477	anti-androgen	4767		Inhibition of hAR transactivation by R1881
3478	anti-androgen	4768		Slight inhibition of hAR transactivation by R1881
3479	anti-androgen	4769		Slight inhibition of hAR transactivation by R1881
3480	anti-androgen	4770		Slight inhibition of hAR transactivation by R1881

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
3481	androgen	4771		Agonistic effect
3482	suspected endocrine effect	4772		Induction of AhR-mediated activity
3483	suspected endocrine effect	4773		4.5-fold induction of AhR-mediated activity
3484	suspected endocrine effect	4774		4.5-fold induction of AhR-mediated activity
3485	suspected endocrine effect	4775		4.5-fold induction of AhR-mediated activity
3486	suspected endocrine effect	4776		4.5-fold induction of AhR-mediated activity
3487	suspected endocrine effect	4777		IC50 for [3H]testosterone displacement from SHBG: 2.6 µM
3488	suspected endocrine effect	4777		IC50 for [3H]17-beta-estradiol displacement from SHBG: 1.9 µM
3489	suspected endocrine effect	4777		100 µM: 72% increase in non-SHBG-bound testosterone
3490	suspected endocrine effect	4777		100 µM: 46% increase in non-SHBG-bound 17-beta-estradiol
3491	suspected endocrine effect	4778		IC50 for [3H]testosterone displacement from SHBG: 11.2 µM
3492	suspected endocrine effect	4778		IC50 for [3H]17-beta-estradiol displacement from SHBG: 4.5 µM
3493	suspected endocrine effect	4778		100 µM: 10% increase in non-SHBG-bound testosterone
3494	suspected endocrine effect	4778		100 µM: 11% increase in non-SHBG-bound 17-beta-estradiol
3495	suspected endocrine effect	4779		IC50 for [3H]testosterone displacement from SHBG: 14.6 µM
3496	suspected endocrine effect	4779		IC50 for [3H]17-beta-estradiol displacement from SHBG: 2.8 µM
3497	suspected endocrine effect	4779		100 µM: 44% increase in non-SHBG-bound testosterone
3498	suspected endocrine effect	4779		100 µM: 19% increase in non-SHBG-bound 17-beta-estradiol
3499	suspected endocrine effect	4780		IC50 for [3H]testosterone displacement from SHBG: 51 µM
3500	suspected endocrine effect	4780		IC50 for [3H]17-beta-estradiol displacement from SHBG: 13.6 µM
3501	suspected endocrine effect	4780		100 µM: 30% increase in non-SHBG-bound testosterone
3502	suspected endocrine effect	4780		100 µM: 16% increase in non-SHBG-bound 17-beta-estradiol
3503	suspected endocrine effect	4781		IC50 for [3H]testosterone displacement from SHBG: 159.5 µM
3504	suspected endocrine effect	4781		IC50 for [3H]17-beta-estradiol displacement from SHBG: 21.6 µM
3505	suspected endocrine effect	4781		100 µM: 36% increase in non-SHBG-bound testosterone
3506	suspected endocrine effect	4781		100 µM: 32% increase in non-SHBG-bound 17-beta-estradiol
3507	suspected endocrine effect	4782		IC50 for [3H]testosterone displacement from SHBG: 164 µM
3508	suspected endocrine effect	4782		IC50 for [3H]17-beta-estradiol displacement from SHBG: 91 µM
3509	suspected endocrine effect	4783		IC50 for [3H]17-beta-estradiol displacement from SHBG: 227 µM
3510	suspected endocrine effect	4784		IC50 for [3H]testosterone displacement from SHBG > 170 µM
3511	suspected endocrine effect	4784		IC50 for [3H]17-beta-estradiol displacement from SHBG: 251 µM
3512	estrogen	4785		Inhibition of [3H]17-beta-estradiol binding to ER
3513	estrogen	4786		Inhibition of [3H]17-beta-estradiol binding to ER
3514	estrogen	4787		Inhibition of [3H]17-beta-estradiol binding to ER

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
3515	estrogen	4788		Inhibition of [3H]17-beta-estradiol binding to ER
3516	estrogen	4789		Inhibition of [3H]17-beta-estradiol binding to ER
3517	estrogen	4790		Inhibition of [3H]17-beta-estradiol binding to ER
3518	estrogen	4791		Inhibition of [3H]17-beta-estradiol binding to ER
3519	estrogen	4792		Inhibition of [3H]17-beta-estradiol binding to ER
3520	estrogen	4793		Inhibition of [3H]17-beta-estradiol binding to ER
3521	estrogen	4794		Inhibition of [3H]17-beta-estradiol binding to ER
3522	estrogen	4795		Inhibition of [3H]17-beta-estradiol binding to ER
3523	estrogen	4797		Induction of estrogen-mediated gene transcription
3524	estrogen	4798		Induction of estrogen-mediated gene transcription
3525	estrogen	4799		Induction of estrogen-mediated gene transcription
3526	estrogen	4800		Induction of estrogen-mediated gene transcription
3527	estrogen	4801		Induction of estrogen-mediated gene transcription
3528	estrogen	4802		Induction of estrogen-mediated gene transcription
3529	estrogen	4803		Induction of estrogen-mediated gene transcription
3530	estrogen	4804		Induction of estrogen-mediated gene transcription
3531	anti-estrogen	4805		Dose-dependent inhibition of 17-beta-estradiol-induced activity
3532	anti-estrogen	4806		Dose-dependent inhibition of 17-beta-estradiol-induced activity
3533	anti-estrogen	4807		Dose-dependent inhibition of 17-beta-estradiol-induced activity
3534	suspected no endocrine effect	4808		No binding to ER
3535	estrogen	4809		Inhibition of [3H]17-beta-estradiol binding to ER
3536	suspected endocrine effect	4810		Significant dose-responserelation between serum concentrations and the risk of breast cancer
3537	suspected endocrine effect	4811		Slight (not significant) increase in risk of breast cancer
3538	suspected no endocrine effect	4812		No apparent association between serum concentrations and the risk of breast cancer
3539	suspected no endocrine effect	4813		No apparent association between serum concentrations and the risk of breast cancer
3540	suspected no endocrine effect	4814		No apparent association between serum concentrations and the risk of breast cancer
3541	suspected no endocrine effect	4815		No apparent association between serum concentrations and the risk of breast cancer
3542	estrogen	4816		Induction of estrogen-responsive gene expression
3543	suspected no endocrine effect	4817		No induction of estrogen-responsive gene expression
3544	estrogen	4818		Induction of cell growth
3545	estrogen	4819		Weak induction of cell growth
3546	suspected no endocrine effect	4820		No induction of cell growth
3547	suspected no endocrine effect	4821		No induction of cell growth
3548	suspected no endocrine effect	4822		No induction of cell growth

Effect ID	Hormone Name	Endocrine ID	Effect Code	Effect Description
3549	suspected no endocrine effect	4823		No induction of cell growth
3550	suspected no endocrine effect	4825		No uterotrophic activity
3551	estrogen	4824		Uterotrophic activity
3552	estrogen	4826		Increased plasma VTG levels
3553	estrogen	4827		Increased plasma VTG levels
3554	estrogen	4828		Increased plasma VTG levels compared to control site
3555	estrogen	4829		Increased plasma VTG levels compared to control site
3556	estrogen	4830		Increased plasma VTG levels compared to control site
3557	estrogen	4828		Occurrence of ovotestis and intersex
3558	estrogen	4829		Occurrence of ovotestis and intersex
3559	estrogen	4830		Occurrence of ovotestis and intersex
3560	suspected endocrine effect	4828		Increased hepatic EROD activity
3561	suspected endocrine effect	4829		Increased hepatic EROD activity
3562	suspected endocrine effect	4830		Increased hepatic EROD activity

RefID	Authors	Year	Title	Source
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