IN VITRO EMBRYOGENESIS OF *NEOMYSIS INTEGER* (CRUSTACEA, MYSIDACEA) AS A POTENTIAL INDICATOR OF ENDOCRINE DISRUPTION

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The brackish water mysid *Neomysis integer* has been put forward to use as a test organisms for the evaluation of environmental endocrine disruption in the brackish reaches of Western European estuaries and inland water bodies. As the embryonic development is a critical time window within the life history of an organism, it has high potential to serve as a bio-assay for testing endocrine disruption. Within the present study a protocol has been developed to follow the in vitro embryogenesis of *Neomysis integer* and the most sensitive endpoints for endocrine disruption has been determined.

Daily survival percentage, percentage survival days, hatching success, duration of each developmental stage and the size increment of the embryos were followed as potential endpoints. The optimal combination of salinity and temperature was obtained using a central composite design, and the response of the endpoints was fitted with a response surface model. The survival and hatching success are highly dependent on the salinity conditions, while the development time is strongly affected by temperature. Optimal salinity for embryonic development of *Neomysis integer* is 15psu; optimal temperature around 15 - 20°C.

The potential of the endpoints for use as a bio-assay for endocrine disruption was tested with the pesticide methopreen, a juvenile hormone-analog. Post-fertilization exposure of the embryos at 1μg to 100μg methopreen l^{-1} caused a significantly lower survival and hatching percentage. As a result of concentrations from 0.01μg methopreen l^{-1} and higher, the development time of the embryonic stage II and III and the time to hatching were altered.