

C.I.P.S.

I.C.W.B.

Mathematisch model van de
pollutie in de Noordzee.

Technical Report

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PESTICIDES IN MARINE MICROORGANISMS.

M. Lauwereys, A. Roelandt, N. Harnie, A. Vercruysse
(Laboratorium Farmacognosie, Fytochemie, Toxicologie - V.U.B. - Brussel.)

I. INTRODUCTION

This report deals with results obtained from samples taken on the cruises in the North Sea during January, May, June 1973.

The samples are listed in table I.

The procedure used was the same as described in previous reports (1) (2).

II. Operating Conditions

Are the same as in previous reports.

(1) Pesticides in marine microorganisms. M. Lauwereys, N. Vlerick,
A. Roelandt, A. Vercruysse.

(2) Pesticides in marine microorganisms. M. Lauwereys, A. Roelandt,
A. Vancrombrugge, A. Vercruysse.

Table I.

Identification Place Date		Time of sampling	Dry organic matter present in 50 g wet plankton expressed in g.
M01	05-06-73	10.00	1,58
M06	31-01-73		1,01
M06	04-06-73	15.00	1,31
M06	05-06-73	10.00	1,18
M06	07-06-73	11.30	1,62
M06	07-06-73	16.00	2,20
M06	08-06-73	11.30	1,10
M14	12-06-73	19.00	1,35
M14	13-06-73	10.00	1,34
M14	14-06-73	09.00	1,28
x M14	18-06-73	16.30	
x M14	19-06-73	16.00	
x M14	20-06-73	17.10	
x M14	21-06-73	18.10	
x M14	21-06-73	08.30	
x M16	08-05-73	10.00	
x M16	09-05-73	11.15	
M16	26-05-73	13.00	1,32
M16	27-05-73	12.45	1,42
M16	28-05-73	14.00	1,21

x These samples contained insufficient plankton.

III. Results

Table II summarizes the results obtained gaschromatographically.
The amounts are expressed in ppm (mg pesticide/g dry organic matter).

Table II.

	P.C.B.	γ BHC	Heptachlor epoxyde	op'DDE pp'DDE	Dieldrin	pp'TDC op'TDE	Endrin
M01 06-06-73	0.13	0.008	<0.013	0.020	0.013	<0.013	
M06 31-01-73	0.40	0.012			<0.020		
M06 04-06-73	<0.15		<0.015		0.018		
M06 05-06-73	<0.17	0.034					<0.017
M06 07-06-73 11.30	0.62	0.049	<0.012	<0.012	0.049		0.024
M06 07-06-73 16.00	0.45	0.018	0.009	0.009	0.091	0.009	0.018
M06 08-06-73	0.36	0.011	<0.018	<0.018	<0.018	0.045	<0.018
M14 12-06-73		0.012					
M14 13-06-73	<0.15	0.012			<0.015		
M14 14-06-73	<0.16	0.009					
M16 26-06-73		0.004			<0.014		<0.024
M16 27-06-73		0.005			<0.014		
M16 28-06-73		0.003			<0.016		

IV. Discussion

1. The amount of plankton present in some samples was often insufficient. The dry organic matter weight for 50 g wet plankton did not even reach 250 mg.
In order to detect pesticides in those samples high concentrations of pesticides should to be present (0.05 to 0.1 ppm).
These values were practically nowhere reached.
This is the case for the points in Table I where no values for the dry organic matter weight are mentioned.
2. Point M06 has relative high amounts of pesticides and PCB's. The concentration variations during a week are significant for the PCB's and Dieldrin.
For the other points most of the pesticides found were near to the minimal detectable concentrations.
3. It is not the first time that samples taken at point M14 contained insufficient plankton to be analysed.
4. In this report the BHC is reported because there are no difficulties for interpretation . Anywhere high concentrations can be mentioned.