COMMISSION
OF THE
EUROPEAN COMMUNITIES

Directorate-General
for Social Affairs

Health Protection
Directorate

V/F/I

V/F/1966/74 e

NON-ORGANIC MICROPOLLUTANTS OF THE ENVIRONMENT

Volume 2

DETAILED LISTING OF LEVELS PRESENT IN THE ENVIRONMENT

REPORT OF A WORKING GROUP OF EXPERTS

Prepared for the Commission of the European Communities

Rapporteur: J. BOUQUIAUX

(Institut d'Hygiène et d'Epidémiologie; Ministère de la Santé Publique, de la Famille et de l'Environnement, Bruxelles, Belgique)

Luxembourg July 1974

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VOLUME 2 : Detailed listing of levels present in the environment.

S U M M A R Y

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Page :

LIST OF EXPERTS

COUNTRY	NAME	ADRESS	PRESENT AT THE MEETING N°
BELGIUM	J.BOUQUIAUX (Rapporteur)	Institut d'Hygiène et d'Epidémiologie Ministère de la Santé publique, de la Famille et de l'Environnement 14 rue Juliette Wytsman 1050 BRUXELLES	1-2-3
	A.DENTENEER	Economische Zaken Montoyerstraat, 3 1040 BRUSSEL	2
	P.HERMAN	Institut de Recherches chimiques Ministère de l'Agriculture 5 Molenstraat 1980 TERVUREN	1-2-3
	J.EXSTEYL	Ministère de l'Emploi et du Travail 51/53 rue Belliard 1040 BRUXELLES	1
	M.JURISSE	Ministère de la Santé publique, de la Famille et de l'Environnement Cité administrative de l'Etat Quartier Vésale 1010 BRUXELLES	2
	L.PATERNOTTE	Administration de l'Hygiène et de la Médecine du Travail 53 rue Belliard 1040 BRUXELLES	2
DENMARK	F.BRO-RASMUSSEN	National Food Institute Mørkhøj Bygade 19 2860 SØBORG	2-3
	B.KOCH	Agency of Environmental Protection 47 Store Kongensgade 1264 COPENHAGEN	3
	E.POULSEN	Institute of Toxicology National Food Institute Mørxhøs Bygade 19 2860 SØBORG	2
	J.STEENSBERG	Agency of Environmental Protection 47 Store Kongensgade 1264 COPENHAGEN	3

Meetings n°1 - 7 December 1972

n°2 - 20-21 March 1973

n°3 - 14-15-16 November 1973

COUNTRY	NAME	ADRESS	PRESENT AT THE MEETING N°
FRANCE	P.ANNE	Expert consultant C.C.E. Institut national de la Recherche agronomique -Station d'Agronomie 28 rue de Herrlisheim 68 COLMAR	2-3
	M.C.DUCHESNE	Ministère de l'Agriculture Service des Fraudes 42bis rue de Bourgogne PARIS 7ème	2
	B.FESTY	Laboratoire d'Hygiène de la Ville de Paris 1bis rue des Hospitalières Saint-Gervais 75004 PARIS 4ème	1-2
	J.GREFFARD	Bureau Recherches géologiques et minières 74 rue de la Fédération PARIS 15	1-3
	Y.THIBAUD	Institut de Pêches maritimes La Noë- Route de la Jonelière 44 NANTES	1-2-3
GERMANY	J.GREINER	Bundesministerium für Wirtschaft Postfach 53 BONN - DUISDORF	2
	KLEIN	Bundesanstalt für Gewässerkunde Kaiserin Augusta-Anlagen 15/17 D 54 KOBLENZ	2
	H.MUHLECK	Bundesministerium des Innern Rheindorfer Str. 198 D 53 BONN	2
	R.MUSCHE	Bundesminist.für Jugend Familie und Gesundheit (Bundesgesundheitsamt) Postfach I BERLIN 33	2-3
	H.ROHLEDER	Institut für Okologische Chemie der GSF St. Augustin 1 D 5201 - SCHLOSS BIRLINGHOVEN	3 ./.

Meetings n°1 - 7 December 1972

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COUNTRY	NAME	ADRESS	PRESENT AT THE MEETING N°
GERMANY	E.SCHMIDT	Bundesminist.für Jugend,Familie und Gesundheit (Bundesgesundheitsamt) Postfach I BERLIN 33	3
	O.SORENSEN	Hygiene-Institut der Ruhrgebietes Abbendickweg 12 465 GELSENKIRCHEN	2
IRELAND	P.P.DONOVAN	Public Analyst Department of Health Custom House DUBLIN	1-2-3
ITALY	S.ANNUNZIATA	Direzione Generale Igiene Alimentare Nutrizione-Divisione Additivi 24 Piazza Marconi ROMA	1
	F.COTTA-RAMUSINO	Istituto Superiore di Sanità Viale Regina Elena, 299 ROMA	2-3
LUXEMBOURG	P.HANSEN	Ministère de la Santé publique Institut d'Hygiène et de la Santé publique 1a rue Auguste Lumière LUXEMBOURG	1-2-3
	M.MOLITOR	Administration des Eaux et Forêts 34 avenue de la Porte Neuve LUXEMBOURG	2-3
	PRUD'HOMME	Direction de la Santé publique (Inspection des Pharmacies) 37 rue F.Liszt LUXEMBOURG	2
	R.WENNIG	Ministère de la Santé publique Institut d'Hygiène et de Santé publique 1a rue Auguste Lumière LUXEMBOURG	1-2

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COUNTRY	NAME	ADRESS	PRESENT AT THE MEETING N°
NETHERLANDS	A.G.DE MOOR	Min.voor de Volksgezondheid en Milieuhygiene Leidshendam p/a 1e Vanden Bosch Straat 4 DEN HAAG	1-2-3
	H.W. KROES	Min.voor de Volksgezondheid en Milieuhygiene Dr.Reijersstr 8 LEIDSCHENDAM	3
	P.LEEUWANGH	Institut Vet.Farmacologie & Toxicologie Biltstraat 172 UTRECHT	1-3
	A.MINDERHOUD	Rijksinstituut voor de Volksgezondheid P.O.Box 1 BILTHOVEN	1-2-3
	P.SCHULLER	Rijksinstituut voor de Volksgezondheid P.O.Box 1 BILTHOVEN	1
	J.J.STRIK	Institut Vet.Farmacologie & Toxicologie Biltstraat 72 UTRECHT	1-2
	J.SUURLAND	Min.voor de Volksgezondheid en Milieuhygiene Dokter Reyersstraat 10 LEIDSCHENDAM	1
	F.VAN DER KREEK	Ministerie van Volksgezondheid Dokter Reyersstraat 10 LEIDSCHENDAM	1-2-3
	H.VAN GENDEREN	Institut voor Veterianary,Pharmacology and Toxicology 172 Biltstraat UTRECHT	3

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COUNTRY	NAME	ADRESS	PRESENT AT THE MEETING N°
UNITED KINGDOM	R.BUXTON	Dept.of Health and Social Security Alexander Fleming House Elephant and Castle LONDON	3
	M.COHEN	Ministry of Agriculture,Fisheries and Food -Plant Pathology Laboratory HARPTENDEN, HERTS	1-2-3
	G.COLLINS	Laboratory of the Government Chemist Conwall House, Stanford Street LONDON SEI 9NQ	1
	P.S.ELIAS	Dept.of Health Social Security Alexander Fleming House LONDON SEI	2
	J.RUZICKA	Laboratory of the Government Chemist Conwall House, Stanford Street LONDON SEI 9NQ	2-3
	A.TOLAN	Ministry of Agriculture,fisheries and Food Great Westminster House Houseferry Road LONDON SW1	1

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COUNTRY	NAME	ADRESS	PRESENT AT THE MEETING N°
COMMISSION OF THE EUROPEAN COMMUNITIES	J.SMEETS (Chairman)	D.G. Affaires sociales Protection sanitaire V/F/1 Centre Louvigny LUXEMBOURG	1-2-3
	R.AMAVIS (Secretary)	D.G.Affaires sociales Protection sanitaire V/F/1 Centre Louvigny LUXEMBOURG	1-2-3
	A.BERLIN	D.G.Affaires sociales Protection sanitaire V/F/1 Centre Louvigny LUXEMBOURG	1
	A.BONINI	D.G. Affaires sociales Protection sanitaire V/F/1 Centre Louvigny LUXEMBOURG	1-2-3
	P.BONNET	Service de l'Environnement Protection des Consommateurs 200, rue de la Loi 1040 BRUXELLES	1-2-3
	O.DEMINE	D.G. Agriculture 200, rue de la Loi 1040 BRUXELLES	1
	E.DI FERRANTE	D.G. Recherche,Science et Education 200, rue de la Loi 1040 BRUXELLES	3

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COUNTRY	NAME	ADRESS	PRESENT AT THE MEETING N°
COMMISSION OF THE EUROPEAN COMMUNITIES	R.MAGNAVAL	Association EURATOM /C.E.A Protection sanitaire Boîte postale n°6 FONTENAY AUX ROSES (France)	3
	H.OTT	D.G.Recherche Science et Education 200 rue de la Loi 1040 BRUXELLES	2
	P.RECHT	D.G.Affaires sociales Protection sanitaire Centre Louvigny LUXEMBOURG	3
	G.SERRINI	Centre commun de Recherche 21020 ISPRA-Varese-	3
	M.Th.VAN DER VENNE	D.G.Affaires sociales Protection sanitaire V/F/1 Centre Louvigny LUXEMBOURG	3

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NON - ORGANIC MICROPOLLUTANTS OF THE ENVIRONMENT

A. FOREWORD

This report has been prepared by the working group on the consequences for man and his environment, of environmental pollution due to non-organic micropollutants; it is part of the outline of actions that have to be undertaken at Community level in the domain of reduction of pollutions and nuisances. These actions are included in a comprehensive programme of the European Communities in the field of environment that has been accepted by the Council of Ministers on the 19th of July 1973.

Non-organic micropollutants are listed in the first category of pollutants of the environment which have to be considered primarily because of their toxicity and of the present state of knowledge concerning their sanitary and ecological importance.

The objective evaluation of risks being the aim of the general programme a knowledge is required of the level of these pollutants in the environment as well as a study and analysis of the undesirable effects which would result from exposure of the target to a given pollution or nuisance.

At a meeting held on December 7th 1972, the working group decided to prepare an inventory of the data available since 1968 on the levels of non-organic micropollutants in the environment. The report has been compiled by Mr BOUQUIAUX from information supplied by delegates of the various Member States. The list of micropollutants was examined at the meeting of December 7th, 1972. The final date agreed by the rapporteur for receipt of information was May 15th 1973.

A first draft of the report was examined at the meeting of March 20th and 21st 1973. The final text was discussed at the meeting on November 14th-16th 1973 and was agreed by the experts present except for Volume 4 which was written by Mr BOUQUIAUX after the last meeting.

It should be remembered that 2 important non-organic micropollutants were studied in depth at the Symposium "Problems of contamination of man and his environment by Mercury and Cadmium" organised by the Commission of the European Communities in Luxembourg on 3-5th July 1973.

The whole report appears in 4 volumes entitled:

Volume 1 - general presentation;
Volume 2 - detailed listing of levels present in the environment;
Volume 3 - synthesis of data;
Volume 4 - methods of analysis.

B. PRESENTATION OF THE DOCUMENT

The available information for 26 elements sent to the Directorate of Health Protection of the Commission for the European Communities by representatives of its member countries in an attempt to compile an inventory of data on the occurrence of non-organic micropollutants in the environment is presented in Volumes 2 and 3. Volume 2 classifies about 77,000 measurements and the data for each element are set out in eleven chapters according to the nature of the samples on which they are based .

Where not already done by the authors of the data, series of individual results have been grouped so as to list the number of samples (n) , the lowest value (X min), the highest value (X max) - these present the range - and the arithmetic mean ($\bar{X}$) . Data resulting from a special situation or characteristic of the samples analysed have been presented separately eg'hot-spots'. This treatment of the data has permitted a reasonably homogeneous presentation of results from many sources which is the pre-requisite for an analysis and interpretation of present situation . In this connection it should be remembered that some elements are natural micro-constituents of the environment and where this is the case they are not to be considered as micropollutants .

A B B R E V I A T I O N S.

METHODS .

Preparation of the sample

A = acidification
Ag = concentration on Ag wire
A.dig = acid digestion
C = centrifugation
Calc. = calcination
E = solvent extraction
F = filtration
I.ex. = ion exchange
W.dig = wet digestion
W.ox = wet oxidation

Measurement

AA = atomic absorption
Col = colorimetry
FlAA = flameless AA
G = Gutzeit method for As
GAA = graphite oven AA
NA = neutron activation
Pol = polarography
UV = spectrography U.V
X = X. ray fluorescence

REFERENCES.

B = Belgium
Eir = Ireland
F = France
GB = United Kingdom
D = Federal Republic Germany
DK = Danemark
L = Luxemburg
NL = The Netherlands

C. DETAILED LISTINGS.

ELEMENT

1. River water
2. Sea water
3. River sediments
4. Sea sediments
5. Fresh water organisms
6. Sea organisms
7. Drinking water
8. Food
9. Air
10. Soil
11. Miscellaneous

Sb.1 - River water
Sb.5 - Fresh water organisms
Sb.8 - Food
Sb.9 - Air

ANTIMONY

[redacted]

Element : Antimony

Medium : River water

Unit : µg/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Danube								
- above Ulm	Aug.1971	1			0.08	NA	65 D	
- Tributaries: -Illerkanal	Aug.1971	1			0.05	NA	65 D	
-Lech, above Augsburg	Oct.1971	2			1.0	NA	65 D	
-Lechkanal, first place	Oct.1971	2			5.2	NA	65 D	
2d place	Oct.1971	2			2.3	NA	65 D	

Element : Antimony

Medium : Fresh water organisms

Unit : mg/kg DRY matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
WATERPLANTS									
Fontinalis antipiretica	Danube (Ulm), Lech (Augsburg)	Aug.-Sep.71	3	0.35	0.56	0.47	NA	65 D	
Ranunculus fluitans	Illerkanal	Aug.71	2	0.16	0.2	0.18	NA	65 D	
	Lechkanal, near chem.plant	Sep.71	2	4.8	12.2	8.5	NA	65 D	
Cladophora ssp.	Wartach	Sep.71	1			5.0	NA	65 D	
Various species	Alz	May 71	1			0.24	NA	65 D	
	Alz, Alzkanal near chem.plant	May 71	3	0.6	1.5	1.03	NA	65 D	

[redacted]

Element : Antimony

Medium : Food

Unit : mg/kg WET matter

Sb.8

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
MEAT									
Pork , M.long.dorsi	Bavaria,F.R.G.	1970-71	39	<0.001	0.006	0.001	NA	60 D	
Beef, M.long.dorsi	Bavaria,F.R.G.	1970-71	23	<0.001	0.009	0.001	NA	60 D	
Veal, M.long.dorsi	Bavaria,F.R.G.	1970-71	19		<0.001		NA	60 D	

Element : Antimony
Medium : Air
Unit :

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Particulate matter								
Federal Republic Germany :								
- München , 6 sampling places, monthly samples	1971	53	3.4	55.5	15.28	NA	56 D	µg/g particulates

[redacted]

As.1 (1-3) - River water
As.4 - Sea sediments
As.5 - Fresh water organisms
As.6 - Sea organisms
As.7 - Drinking water
As.8 (1-2) - Food
As.9 - Air

ARSENIC.

Element : Arsenic

Medium : River water

Unit : µg/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Danube								
- 2 places (Leipheim, Bad Abbach)	Aug.71-Nov.72	36	1.2	7.8	3.4	F	45 D	a
- above Ulm	Aug.71	1			2.6	NA	65 D	
- Tributaries:- Illerkanal	Aug.71	1			3.0	NA	65 D	
-Lech, above Augsburg	Oct.71	2			2.4	NA	65 D	
-Lechkanal, first place	Oct.71	2			8.0	NA	65 D	
2d place	Oct.71	2			4.4	NA	65 D	
Havel-Spree , Berlin	1971-72	2	2.9	3.5	3.2	Col	46 D	
Weser								
- Bremen, km 366,2	Oct.71-Mar.72	6	1	8	3	Col	46 D	c
- Bremen	1971-72	23	0.5	13.2	4.8	Col	46 D	

Element : Arsenic

Medium : River water

Unit : µg/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Rhine								
- Bodensee-Lindau	Aug.71-Nov.72	18	2.1	5.5	3.8	FA	45 D	b
-Depth 0m	1971-73	19	0.2	15	3.4	Col	51 D	
-Depth 40m	1971-73	16	0.1	8.3	3.8	Col	51 D	
-Depth 60m	1971-73	21	0.1	9.5	3.1	Col	51 D	
-Depth 80m	1971-73	13	0.1	5.8	3.4	Col	51 D	
- Mannheim, km 434	1971-73	18	<0.1	5.2	<1.9	Col	51 D	
- Mainz km 498.5	1971-73	15	0.1	5.7	2.3	Col	51 D	
- Wiesbaden km 506	1971-73	28	<0.1	6.2	<1.5	Col	51 D	
- Braubach km 581	1971 and 1973	13	3	7	4	Col	48 D	total
Braubach km 581	1971 and 1973	13	1	6	3	Col	48 D	dissolved
- Bimmen	1971-72	23	2.4	26.0	12.7	Col	46 D	b
- Düsseldorf	1971-72	23	0.8	18.4	6.7	Col	46 D	b
- Emmerich(Dutch frontier) km 865	1971 and 73	15	8	25	15	Col	48 D	total
Emmerich(Dutch frontier) km 865	1971 and 73	15	1.4	15	8	Col	48 D	dissolved
- Waal near Nijmegem	1972	39	4.5	20.0	9.6	A Col	41 NL	total
Waal near Nijmegem	1972	39	1.0	12.5	5.4	A Col	41 NL	dissolved
- Ketelmeer (near mouth of Ijssel)	1971-72	17	5.0	14.5	8.6	A Col	41 NL	

Element : Arsenic

Medium : River water

Unit : µg/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks
Rhine									
- Tributaries :									
- Zürichsee	1971-73	3			1.2	Col	51	D	
- Main, Ottendorf km 345	1971-73	15	<0.1	8.2	<2.9	Col	51	D	
Garstadt km 325	1971-73	15	<0.1	2.3	<1.6	Col	51	D	
Kostheim km 0.5	1971-73	12	<0.1	9.5	<3.4	Col	51	D	
- Mosel, Koblenz km 2	1971 and 73	13	1.4	6	4	Col	48	D	total
Koblenz km 2	1971 and 73	13	0.4	5	3	Col	48	D	dissolved
- Ruhr , Part a	1971-73	53	2	15	7	F	47	D	d.week average
Part b	1971-73	53	2	10	6	F	47	D	d.week average
Part c	1971-73	6	3	12	9	F	47	D	d.month averag
Part d	1971-73	6	11	13	12	F	47	D	d.month averag
Maas									
- Eysden (Dutch frontier)	1971-72	16	3.5	26.5	6.5	A Col	41	NL	
- Keizersveer	1972	7	2.0	8.0	4.9	A Col	41	NL	

Remarks :

a) Continuous sampling for a monthly sample.
b) Daily samples composited into a monthly sample.
c) 3 times a week- samples composited into a monthly sample.
d) Continuous sampling .

Element : Arsenic

Medium : Sea sediments

Unit : mg/kg

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Baltic Sea - Flensburg fjord,								
- Western part, 3 sampling places	May-Oct.70	16	2.4	20	10.6	Col	62 DK	On dry matter
- Eastern part (sea side), 4 sampling places	May-Oct.70	15	1.1	14	8.8	Col	62 DK	On dry matter

Element : Arsenic
Medium : Fresh water organisms
Unit : mg/kg DRY matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
WATERPLANTS									
Fontinalis antipiretica	Danube (Ulm), Lech (Augsburg)	Aug.-Sep.71	3	2.6	7.7	4.7	NA	65 D	
Ranunculus fluitans	Illerkanal, Lechkanal	Aug.-Sep.71	4	0.7	3.0	1.9	NA	65 D	
Cladophora ssp.	Wertach	Sep.71	1			4.8	NA	65 D	
Various species	Alz and Alzkanal, near chem.plants	May 71	4	0.7	30.9	13.9	NA	65 D	

[redacted]

Element : Arsenic

Medium : Sea organisms

Unit : mg/kg WET matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	M.	Ref.	Remarks.
MOLLUSCS									
Ostrea edulis (oyster)	Galway Bay (Ireland)	May 72-Mar.73	12	0.50	1.50	1.10		1 Eir	
Patella vulgata (limpet)	Severn estuary, South shore	1971-72	10	1.0	3.7	2.6	AA	21 GB	

Element : Arsenic
Medium : Drinking water
Unit : µg/ℓ

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
	Surface waters									
Lindau	Bodensee (40m)	Jun.-Dec.72	5	0.9	6.2	3.4	A Col	45	D	a
Düsseldorf	Rhine	1971-72	22	<0.5	2.4	0.8	Col	4	D	
Rotterdam-Honingerdijk	Rhine	Mar.72	1			<0.5		4	NL	
Andijk	Ijsselmeer	Mar.72	1			<0.5		4	NL	
	Groundwaters									
Mainz	19 groundwaters	1971-73	44	<0.1	8.1	<2.1	Col	51	D	
Mainz	Mainwater	1971-73	21	0.4	7.7	1.6	Col	51	D	
Haarlem	Dunes	Mar.72	1			1.5		4	NL	
Castricum(The Netherlands)	Dunes recharged with Rhine water	Mar.72	1			0.5		4	NL	
Amsterdam Leiduin	Dunes recharged with Rhine water	Mar.72	1			<0.5		4	NL	
Den Haag	Dunes recharged with Rhine water	Mar.72	1			1.0		4	NL	

Remarks :

a- Daily samples composited into a monthly sample .

Element : Arsenic

Medium : Food

Unit : mg/kg or ppm

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
BEVERAGES										
Soft drinks	West Ireland	1969-71	22	0.01	0.10	0.02	G.or Col	1	Eir	a
Soft drinks (concentrates)	West Ireland	1969-71	3	0.15	0.20	0.18	G.or Col	1	Eir	a
Beers	West Ireland	1969-71	46	<0.01	0.12	0.01	G.or Col	1	Eir	a
White wine	Made in F.R.G.	1966 and 71	12	0.0001	0.029	0.008	Col	55	D	
	Imported in F.R.G.	1966 and 71	18	0.0001	0.033	0.012	Col	55	D	
Red wine	Made in F.R.G.	1966 and 71	2	0.006	0.02	0.013	Col	55	D	
	Imported in F.R.G.	1966 and 71	10	0.004	0.019	0.013	Col	55	D	
EGGS-	F.R.G.	1971-72	900	0.01	0.04	0.02		55	D	
CANNED FISH										
Salmon	West Ireland	1969-71	2	0.05	0.05	0.05	G.or Col	1	Eir	a
MEAT AND MEAT PRODUCTS										
Meat, muscle	F.R.G.	1971-72	24	0.00	0.03	0.01	Col	55	D	
Meat, organs	F.R.G.	1971-72	40	0.00	0.14	0.04	Col	55	D	
Pork,M.longi.dorsi	Bavaria,F.R.G.	1970-71	55	0.008	0.064	0.028	NA	60	D	b
Beef, M.longi,dorsi	Bavaria,F.R.G.	1970-71	21	<0.001	0.005	0.002	NA	60	D	b
Veal, M.longi,dorsi	Bavaria,F.R.G.	1970-71	22	<0.001	0.004	0.001	NA	60	D	b
Poultry lever	F.R.G.	1971-72	30	0.00	0.35		Col	55	D	
Kidneys of pigs	The Netherlands	Jan.-Sep.72	87	<0.005	0.371		Col	40	NL	b.Median=0.005
Kidneys of cattle	The Netherlands	Jan.-Sep.72	80	0.005	0.238	0.064	Col	40	NL	b.

Element : Arsenic

Medium : Food

Unit : mg/kg or ppm

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
CEREALS										
Wheat, rye, maize	F.R.G. Mainly imported	1971	9	0.20	1.85	0.73		55	D	
Wheat flour	F.R.G.	1971	3	0.13	0.15	0.14		55	D	
Wheat semolina	F.R.G.	1971	2	0.08	0.20	0.14		55	D	
VEGETABLES										
Cabbage	F.R.G.	1971-72	4	0.04	0.60	0.45	G	55	D	
Broccoli	Imported from Italy	1971-72	1			<0.1		55	D	
Cauliflower	Whole Netherlands	late 1969	20	<0.005	0.005	0.005	Col	40	NL	b
Spinach	Whole Netherlands	late 1969	18	0.012	0.404	0.100	Col	40	NL	b
Endive	Whole Netherlands	late 1969	20	<0.005	0.23		Col	40	NL	b.Median=0.054
Carrots	Whole Netherlands	late 1969	21	<0.005	0.020		Col	40	NL	b.Median=0.007
VEGETABLE PRESERVES										
Tinned tomato	Imported from Italy	1971	2		<0.1		G	55	D	
FRUIT										
Apples	F.R.G. inland product	1969 and 73	16	<0.01	0.13	0.02	G	55	D	
	Imported from Italy; France, Holland	1969 and 73	42	<0.05	0.4	~0.05	Col	55	D	
	Whole Netherlands	late 1969	20	<0.005	0.073		Col	40	NL	b.Median=0.007
Fruit juice	F.R.G.			<0.003	0.011			50	D	
PREPARED MEALS										
Soups	West Ireland	1969-71	5		<0.01		G or Col	1	Eir	a

REMARKS : a- On material as sold in shop. b- On wet matter.

Element : Arsenic

Medium : Air

Unit :

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Particulate matter								
United Kingdom, 7 sampling places	1971-72		0.002	0.019	0.007	NA	43 GB	µg/kg air
Federal Republic Germany :								
- München, 6 sampling places, monthly samples	1971	52	1.8	74.9	20.11	NA	56 D	µg/g particulates
Rain (+ fallout)								
United Kingdom , 1 sampling place (pure area)	1971				1.6	NA	43 GB	µg/ℓ

Ba.8 - Food

BARIUM.

Element : Barium

Medium : Food

Unit : mg/kg WET matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
MEAT									
Pork, M.longi .dorsi	Bavaria,F.R.G.	1970-71	37	0.18	0.96	0.5	NA	60 D	
Beef, M.longi. dorsi	Bavaria,F.R.G.	1970-71	17	0.003	0.58	0.19	NA	60 D	
Veal, M.longi. dorsi	Bavaria,F.R.G.	1970-71	11	0.029	0.34	0.15	NA	60 D	

Be.1 - River water
Be.7 - Drinking water

BERYLLIUM

[redacted]

Element : Beryllium

Medium : River water

Unit : µg/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Rhine								
- Bodensee , Depth 0m	1971-73	15			<0.2	AA	51 D	
Depth 40m	1971-73	22			<0.2	AA	51 D	
Depth 60m	1971-73	21			<0.2	AA	51 D	
Depth 80m	1971-73	20			<0.2	AA	51 D	
- Mannheim, km 434	1971-73	23			<0.2	AA	51 D	
- Mainz , km 498.5	1971-73	16			<0.2	AA	51 D	
- Wiesbaden, km 506	1971-73	33			<0.2	AA	51 D	
- Tributaries :								
- Zürichsee	1971-73	3			<0.2	AA	51 D	
- Main, Ottendorf, km 345	1971-73	16			<0.2	AA	51 D	
Garstadt , km 325	1971-73	15			<0.2	AA	51 D	
Kostheim, km 0.5	1971-73	15			<0.2	AA	51 D	
Miscellaneous								
- Running water								
Region Wiesbaden, 33 places of sampling	1971-73	188			<0.2	AA	51 D	

Element : Beryllium
Medium : Drinking water
Unit : µg/ℓ

Identification of samples	Origin	Period	n	Xmin	Xmax	$\overline{X}$	Meth.	Ref.	Remarks.
	Groundwaters								
Wiesbaden	Mainwater	1971-73	23			<0.2	AA	51 D	
Mainz	19 Groundwaters	1971-73	47			<0.2	AA	51 D	
Mainz	Mainwater	1971-73	23			<0.2	AA	51 D	

[redacted]

Bi.1 - River water

BISMUTH

[redacted]

Element : Bismuth

Medium : River water

Unit : µg/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Rhine								
- km 643- 865		3	30	100	60	AA	54 D	
- Tributaries :								
- Sieg (Mouth)		3	85	100	54	AA	54 D	
- Wupper (mouth)		3	25	60	37	AA	54 D	
- Erft (mouth)		3	25	40	30	AA	54 D	
- Ruhr (mouth)		3	25	50	33	AA	54 D	
- Rheinberger- Altrhein		3	50	350	183	AA	54 D	
- Lippe (mouth)		3	25	180	100	AA	54 D	

B.1 - River water
B.7 - Drinking water
B.10- Soil
B.11- Miscellaneous

BORON.

[redacted]

Element : Boron
Medium : River water
Unit : µg/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.		Ref.		Remarks
Danube ,2 places (Leipheim and Bad Abbach)	Aug.71-Nov.72	36	52	107	76	AF		45	D	a
Tegel (N.W of Berlin)										
- Tegel river(mouth in Tegel lake)	Sept.72-Fev.73	9	340	520	440	F	Col	57	D	
- Nordgraben(mouth in Tegel lake)	Sep.72-Fev.73	9	300	560	420	F	Col	57	D	
- Tegel lake,3 sampling places	Sep.72-Fev.73	30	90	370	200	F	Col	57	D	
Weser, Bremen	1972	4	140	190	162		Col	46	D	
Rhine										
- Bodensee, Lindau	Aug.71-Nov.72	18	22	39	27	AF		45	D	
- Bimmen	1972	4	160	310	217		Col	46	D	
- Düsseldorf	1972	4	120	260	200		Col	46	D	
Miscellaneous										
- Interstitial water of sediments	Apr.72-Fev.73									
- Tegel river(mouth in Tegel lake)		6	460	840	620	F	Col	57	D	
- Nordgraben(mouth in Tegel lake)		3	480	780	610	F	Col	57	D	
- Tegel lake,3 sampling places		17	130	330	220	F	Col	57	D	

Remarks :
a- Continuous sampling for a monthly sample

Element : Boron

Medium : Drinking water

Unit : µg/ℓ

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
	Surface waters								
Lindau	Bodensee (40m)	Jun- Dec.72	7	16	25	22	A Col	45 D	a
Düsseldorf	Rhine	1972	4	110.0	130.0	117.5	Col	46 D	

Remarks :

a- Daily samples composited into a monthly sample.

Element : Boron
Medium : Soil
Unit : mg/kg

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
Sandy soil under pines, 3 layers to 0.2- 0.28m depth	Belgium, Bokrijk	1970	6	15.4	22.5	20	UV	31 B	
Sandy soil, cultivated	Belgium, Bredene	1968	2	35	49	42	UV	32 B	
Garden soil with humus	Belgium, Meisse	1968	5	36	62	48	UV	32 B	
Soil developed from rubbles (of ruin)	F.R.G., Berlin	Nov. 1971	4	0.8	7.3	4.2	Col	57 D	On dry material<2mm

Element : Boron
Medium : Miscellaneous
Unit : mg/kg DRY matter

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
PLANTS								
Bredene, Belgium -Sandy soil, cultivated								
- Meadow grass	1968	1			1.9	UV	32 B	
	1970	3	3.4	4.5	4	UV	32 B	
- Wheat	1968	1			0.7	UV	32 B	
- Barley	1968	1			1.5	UV	32 B	
Bokrijk, Belgium -Sandy soil								
- Pine - needles	1970	5	5	37	17	UV	32 B	
Vicinity of a metallurgical plant, Belgium								
Pine-needles, spinach, rhubarb	1972	4	29	24	22	UV	32 B	

Br.1 - River water
Br.5 - Fresh water organisms
Br.8 - Food
Br.9 - Air

BROMINE

Element : Bromine

Medium : River water

Unit : µg/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Danube								
- above Ulm	Aug. 71	1			15	NA	65 D	
- Tributaries :								
- Illerkanal	Aug. 71	1			3.0	NA	65 D	
- Lech, above Augsburg	Oct. 71	2			800	NA	65 D	
- Lechkanal, first place	Oct. 71	2			760	NA	65 D	
2d place	Oct. 71	2			605	NA	65 D	

Element : Bromine
Medium : Fresh water organisms
Unit : mg/kg DRY matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
WATERPLANTS									
Fontinalis antipiretica	Danube (Ulm), Lech (Augsburg)	Aug.-Sep.71	3	9.4	162	62	NA	65 D	
Ranunculus fluitans	Lechkanal, near chem.plant	Sep.71	2	128	299	213	NA	65 D	
	Illerkanal	Aug.71	2	14.6	15.1	14.8	NA	65 D	
Cladophora ssp.	Wertach	Sep.71	1			244	NA	65 D	

Element : Bromine

Medium : Food

Unit : mg/kg WET matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Lth.	Ref.	Remarks.
MEAT									
Pork, M.longi . dorsi	Bavaria,F.R.G.	1970-71	60	0.15	4.90	1.84	NA	60 D	
Beef, M.longi . dorsi	Bavaria,F.R.G.	1970-71	25	0.46	4.02	1.73	NA	60 D	
Veal, M.longi . dorsi	Bavaria,F.R.G.	1970-71	22	0.11	6.10	2.64	NA	60 D	

Element : Bromine

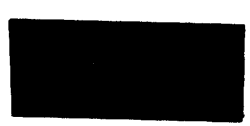
Medium : Air

Unit :

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Particulate matter								
Federal Republic Germany :								
- München ,6 sampling places, monthly samples	1971	52	85.6	6758	1820	NA	56 D	µg/gparticulates

Cd.1 (1-5) - River water
Cd.2 (1-2) - Sea water
Cd.3 - River sediments
Cd.4 - Sea sediments
Cd.5 - Freshwater organisms
Cd.6 (1-6) - Sea organisms
Cd.7 - Drinking water
Cd.8 (1-20) - Food
Cd.9 - Air
Cd.10 - Soil

CADMIUM



Element : Cadmium
Medium : River water
Unit : µg/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Danube								
- 2 places (Leipheim, Bad Abbach)	Aug.71-Nov.72	36	0.5	3.1	1.95	F AA	45 D	a
- Tributary Altmühl	1969-71	25			2.86	Col.orAA	50 D	
Havel-Spree (Berlin)	1971-72	3	1	1.5	1.2	AA	46 D	
Weser								
- km 366.2, Bremen	Oct.71-Mar.72	6	2	2	2	AA	52,46 D	c
- Bremen	1971-72	24	1.4	7.3	2.6	AA	46 D	
Rhine								
- Bodensee - Lindau	Aug.71-Nov.72	18	0.5	2.0	1.1	F AA	45 D	b
- Depth 0m	1971-73	22	0.8	2.4	3	AA	51 D	
- Depth 40m	1971-73	21	0.7	3.4	2	AA	51 D	
- Depth 60m	1971-73	22	<0.1	2.9	2	AA	51 D	
- Depth 80m	1971-73	18	0.7	2.9	1.8	AA	51 D	
- Mannheim, km 434	1971-73	23	4	4	3.0	AA	51 D	
- Mainz km 498.5	1971-73	23	4	4	3.0	AA	51 D	
- Wiesbaden km 506	1971-73	16	2	4	2.0	AA	51 D	
- Braubach km 581	1971 and 73	11	3	5	4	AA	48 D	total
Braubach km 581	1971 and 73	13	1.3	4	3	AA	48 D	dissolved
- Bimmen	1971-72	24	3.1	16.4	6.1	AA	46 D	

Element : Cadmium

Medium : River water

Unit : µg/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Rhine								
- Düsseldorf	1971-72	24	1.2	16.2	3.3	AA	46 D	
- Emmerich (Dutch frontier)	1971 and 73	12	4	13	8	AA	48 D	total
Emmerich (Dutch frontier)	1971 and 73	39	1.7	10	5	AA	48 D	dissolved
- Waal near Nijmegen	1972	38	2.0	7.6	3.9	AE AA	41 NL	~56% in susp. matter.
- Ketelmeer(near mouth of Ijssel)	1971-72	17	<0.1	3.5	1.15	AE AA	41 NL	
- Tributaries :								
- Main , Ottendorf , km 345	1971-73	16	1	4	2.5	AA	51 D	
Garstadt , km 325	1971-73	15	2	4	2.7	AA	51 D	
Kostheim , km 0.5	1971-73	15	2	4	3.6	AA	51 D	
- Regnitz,2 sampling places	1965-72	112			5.84	Col.or AA	50 D	d
- Mosel,Koblenz, km 2	1971 and 73	11	4	7	5	AA	48 D	total
Mosel, Koblenz,km 2	1971 and 73	13	1	6	3	AA	48 D	dissolved
- Sûre,Dam of Esch/Sûre 4 places of sampling	1972	11		<1		AA	9 L	
- Sieg (mouth)		4	2	5	3	AA	54 D	
- Wupper (mouth)		4	2	5	3.5	AA	54 D	
- Erft (mouth)		4	2	5	3	AA	54 D	

Element : Cadmium

Medium : River water

Unit : µg/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Rhine								
- Tributaries :								
- Ruhr, part a	1971-73	53	1	5	2	F	47 D	week averages
part b	1971-73	53	1	10	3	F	47 D	week averages
part c	1971-73	6	2	2	2	F	47 D	month averages
part d	1971-73	6	2	2	2	F	47 D	month averages
(mouth)		4	2	3	2.5	AA	54 D	
- Lippe (mouth)		4	3	5	4	AA	54 D	
Maas								
- from French frontier to above Liège + affluents excepting Vesdre	Sep.71-Dec.72	37	2.1	10.6	4.94	AC GAA	15 B	
- Affluent Vesdre, Liège	Sep.71-Dec.72	2	40	106		AC GAA	15 B	
- from Liège to Dutch frontier	Sep.71-Dec.72	9	6.3	19.2	10.4	AC GAA	15 B	
- Eijsden	1971-72	16	1.8	15.5	6.0	AE AA	41 NL	
- Keizersveer	1972	7	0.7	4.4	1.7	AE AA	41 NL	
- Grave	1971	5		<3			5 NL	
Scheldt, tidal zone, from Ruppelmonde to the sea	Nov.71-Mar.72	183	0.11	14.5	1.47	F Pol	13.4,5,6 B	
Yser, and affluents, from French frontier to the sea	Sep.71-Dec.72	15		<5		ACE AA	15 B	

Element : Cadmium

Medium : River water

Unit : µg/ℓ

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Conway (Wales)								
- above tidal influence	1969	8	<0.03	2.03	0.50	I.ex AA	26 GB	
- below tidal influence	1969	16	0.16	2.12	0.67	I.ex AA	26 GB	
- Tributaries from mineralized area (former mining activity)	1969	12	<0.03	10.7	2.5	I.ex AA	26 GB	
- Tributaries from unmineralized area (East)	1969	22	<0.03	1.20	0.43	I.ex AA	26 GB	
Ystwyth (Wales)	Sep.70-Oct.71	14?	1.1	1.3		I.ex Pol	25 GB	Mineralized area
- Tributary								
- Rheidol	Sep.70-Oct.71	14?	1.0	3.4		I.ex Pol	25 GB	Mineralized area
Dwyryd (Wales) (downstream, before tidal influence)	Sep.70-Oct.71	14?			2.6	I.ex Pol	25 GB	Mineralized area

Element : Cadmium
Medium : River water
Unit : µg/ℓ

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Miscellaneous								
- Running water								
Region Wiesbaden, 33 sampling places	1971-73	184	< 1	12.6	~ 1	AA	51 d	

Remarks :
a- Continuous sampling for a monthly sample
b- Daily samples composited into a monthly sample
c- 3 times a week-samples composited into a monthly sample
d- Tributary of Main .

Element : Cadmium

Medium : Seawater

Unit : µg/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
West of Scotland, Atlantic Ocean	1970	5	<0.01	0.41	0.04	FE AA	27 GB	a.b
West of Scotland, coastal area	1970	8	<0.01	0.18	<0.01	FE AA	27 GB	a.b
Irish Sea :								
- Western part , offshore	1970	10	<0.01	0.52	0.11	FE AA	27 GB	a.b
- Eastern part, offshore	1970	21	<0.01	0.62	0.04	FE AA	27 GB	a.b
- Western part, shoreline	1970	9	0.03	1.43	0.41	FE AA	27 GB	a.b
- Eastern part, shoreline	1970	11	0.15	1.14	0.46	FE AA	27 GB	a.b
- Liverpool Bay	1969-71		0.14	0.74	0.27	I.ex Pol	24 GB	c
- Colwyn Bay (Wales)	1969-71				0.2	FE AA	27 GB	
- Conway Bay (Wales)	1969-71				0.76	I.ex AA	26 GB	d
- Cardigan Bay (Wales)	1969-71		0.48	2.41	1.11	I.ex Pol	24 GB	d
Bristol Channel	1969-71		0.28	4.20	1.13	I.ex Pol	24 GB	c
- Bristol channel, South shore, Western part	1970-71	4	0.3	1.2	0.75	Pol	19 GB	c
- Severn estuary	1970-71	4	1.3	5.8	3.2	Pol	19 GB	c

Element : Cadmium

Medium : Sea water

Unit : µg/ℓ

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.		Ref.		Remarks
English Channel, coastal area of U.K	1970	4	<0.01	0.38	0.06	FE	AA	27	GB	a.b
North Sea :										
- Coastal area of UK	1970-71	43	0.01	1.4	0.20	FE	AA	42	GB	a
- South East, 7 cruises	Jun.71-Sep.72	93	0.05	1.01	0.29	F	Pol	13.1to5	B	
- Belgian shoreline, 12 sampling places	Aug.72	12	<5	6	<5	ACE	AA	15	B	

Remarks

a- $\bar{X}$ = geometric mean

b- Percentage of total cadmium in filtered water : 80 to 83

c- Dominant source of pollution : domestic and industrial effluents

d- Dominant source of pollution : runoff from mineralized areas (former mining activity).

Element : Cadmium

Medium : River sediments

Unit : µg/kg

Cd.3.1

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks
Danube	Winter 71-72		7	29	14	AA	44	D	a
Elbe	Winter 71-72		15	25	21	AA	44	D	a
- Elbe, Hamburg harbour	Feb.73	12	6	62		A.dig. AA	53	D	b
Weser	Winter 71-72		6	23	14	AA	44	D	a
Ems	Winter 71-72		7	17	10	AA	44	D	a
Rhine	Winter 71-72		3	23	9	AA	44	D	a
- Tributaries :									
- Neckar	Winter 71-72		5	88	37	AA	44	D	a
- Main	Winter 71-72		6	19	12	AA	44	D	a
- Dam of Esch/Sûre	1972	8	<1	3.6	2.1	Pol or AA	9	L	b.c
- Ruhr	1965-72	19	4	56	17		47	D	b
Maas									
- from French frontier to above Liège + affluents excepting Vesdre	Sep.71-Dec.72	34		<200		UV	15	B	b
- 2 places in Liège, the first after an industrial area, the second after affluent Vesdre	Sep.71-Dec.72	2			230	UV	15	B	b
- Affluent Vesdre, lower part, after an industrial area	Sep.71-Dec.72	2			430	UV	15	B	b

Element : Cadmium

Medium : River sediments

Unit : mg/kg

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Scheldt and affluents, from French frontier to above Ghent	Sep.71-Dec.72	6		<250	200	UV	15 B	b

Remarks :

a- On clay fraction <2 µm . Sedimentaire clay, as comparison : 0.3

b- On dry matter

c- 2 sampling places + sediment on the filters of the water purification plant.

Element : Cadmium

Medium : Sea sediments

Unit : mg/kg

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Baltic Sea - Flensburg fjord,								
- Western part, 3 sampling places	May-Oct.70	20	0.4	4.6	2.0	AA	62 DK	On dry matter
- Eastern part (sea side), 4 sampling places	May- Oct.70	15	0.1	1.9	0.74	AA	62 DK	On dry matter
Irish Sea - Severn estuary, south shore	1970-71	7	1.6	4.7	3.7	AA	19 GB	On dry matter

Element : Cadmium

Medium : Fresh water organisms

Unit : mg/kg

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
WATERPLANTS										
Macrophytes	Dam of Esch/Sûre	Jun.-Sep.72	2	1.0	1.3	1.15		9	L	On DRY matte
FISH										
Various species	Dam of Esch/Sûre	Jun.-Sep.72	2	1.0	1.8	1.4		9	L	On DRY matte
	Ruhr	1965-72	16	1	6	3		47	D	On DRY matter
	England and Wales	1971-72	54	<0.05	0.35	<0.09	AA	70	GB	a-On WET matter
	Scotland	1971-72	40			<0.1	AA	70	GB	a-On WET matter

Remarks :

a- On edible portion of the sample as received .

Element : Cadmium

Medium : Sea organisms - Seaweeds

Unit : mg/kg DRY matter

Cd.6.1

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
SEAWEEDS									
Fucus vesiculosus	Coastal areas :								
	- West of Scotland	1970	7	0.9	2.1	1.2	W.ox. AA	27 GB	b.c
	- Irish Sea, west	1970	7	0.5	1.5	1.1	W.ox. AA	27 GB	b.c
	- Irish Sea, east	1970	13	0.5	3.0	1.4	W.ox. AA	27 GB	b.c
	- Severn estuary and Bristol Channel NE	1970-72	8	6	40	18	AA	20 GB	d
	NW	1970-72	7	2	75	18	AA	20 GB	d
	SE	1970-72	4	25	220	124	AA	19 GB	d
	SW	1970-72	4	15	44	27	AA	19 GB	d
	- English Channel	1970	7	0.4	20.8	1.4	W.ox. AA	27 GB	b.c
	- North Sea	1970	6	0.6	2.1	1.2	W.ox. AA	27 GB	b.c
Porphyra umbilicalis	Shoreline of Irish Sea :								
(Laverweed)	- West	1970	9	0.10	0.97	0.35	W.ox. AA	27 GB	b
	- East	1970	12	0.05	0.87	0.25	W.ox. AA	27 GB	b

Element : Cadmium

Medium : Sea organisms - Molluscs.

Unit : mg/kg WET matter (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
MOLLUSCS									
Ostrea edulis (Oyster)	Galway Bay, Ireland	May.72-Mar.73	12	<0.05	0.50	0.30		1 Eir	
	Thames estuary and English Channel (east) to Portland Bill	1971-72	23	0.36	2.6	1.17	AA	70 GB	e
	English Channel (west) and N.W. coast of Cornwall	1971-72	26	<0.05	1.2	<0.50	AA	70 GB	e
Mytilus edulis (Mussel)	Coastal waters of UK, excluding the 2 following items	1971-72	68	<0.05	2.0	<0.55	AA	70 GB	e
	Poole Harbour	1971-72	15	0.2	7.3	2.3	AA	70 GB	e
	Bristol Channel, NE + SE	1971-72	9	3.7	21	6	AA	70 GB	e, d.
	Severn estuary and Bristol Channel - NE	1970-72	5	26	315	60	AA	20 GB	d. On dry matter
	NW	1970-72	7	4	20	12	AA	20 GB	d. On dry matt
Pecten maximus (S[illegible]p) and Chlamys opercula[illegible] (Queen scallop)	Landed in UK	1971-72	42	0.13	1.4	0.67	AA	70 GB	e
	N.W Scotland and Isle of Man	1971-72	18	0.30	5.6	1.4	AA	70 GB	e
Cardium edule (cockle)	United Kingdom	1971-72	31	<0.05	1.3	<0.32	AA	70 GB	e
Mercenaria mercenaria (Clam)	Thames estuary and English Channel (East)	1971-72	13	0.13	0.39	0.30	AA	70 GB	e

Element : Cadmium

Medium : Sea organisms . Molluscs.

Unit : mg/kg WET matter (a)

Identification of samples	Origin		Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
MOLLUSCS										
Littorina littorea (Winckle)	Coastal waters of UK, excepting the 2 following items		1971-72	8	<0.03	0.65	0.26	AA	70 GB	e
	Poole Harbour, Carmarthan Bay, Cardigan Bay		1971-72	13	0.85	2.3	1.52	AA	70 GB	e
	Bristol Channel	NE	1971-72	10	3.2	8.6	3.8	AA	70 GB	e.d
		SE	1971-72	7	4.8	27	17	AA	70 GB	e.d
	Severn estuary and Bristol Channel	NE	1970-72	9	13	75	35	AA	20 GB	d.On dry mat
		NW	1970-72	7	8	25	17	AA	20 GB	d.On dry mat
		SE	1970-72	3	30	210	127	AA	19 GB	d.On dry mat
		SW	1970-72	4	15	40	24	AA	19 GB	d.On dry matter
Buccinum undatum (Whelk)	Some UK coastal waters		1971-72	7	0.38	1.7	0.8	AA	70 GB	e
Nucella lapillus (Dog Whelk)	Bristol Channel	NE	1971-72	3	14	31	20	AA	70 GB	d
	Severn estuary and Bristol Channel	NE	1970-72	5	110	725	351	AA	20 GB	d.On dry matter
		NW	1970-72	9	31	155	66	AA	20 GB	d.On dry matter
Patella [illegible] (Limpet)	Shoreline of Irish Sea-	- West	1970	9	2.8	35	8.4	W.ox. AA	27 GB	b.c.On dry matter
		- east	1970	8	3.8	23	13.1	W.ox. AA	27 GB	b.c.On dry matter

Element : Cadmium

Medium : Sea organisms . Molluscs.

Unit : mg/kg WET matter (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
MOLLUSCS.									
Patella vulgata (Limpet)	Severn estuary and Bristol Channal -NE	1970-72	8	57	500	235	AA	20 GB	d.On dry matter
	-NW	1970-72	9	9	68	31	AA	20 GB	d.On dry matter
	-SE	1970-72	4	110	550	270	AA	19 GB	d.On dry matter
	-SW	1970-72	4	30	70	45	AA	19 GB	d.On dry matter
	-SE	1970-72	7	47.5	118.5	86.5	AA	21 GB	d.
	-SW	1970-72	5	8.5	34	15.6	AA	21 GB	d.
	-NE	1971-72	11	7.6	65	17	AA	70 GB	d.
	-SE	1971-72	15	5.2	93	39	AA	70 GB	d.

Element : Cadmium

Cd.6.5

Fish : Sea organisms . Crustaceans

Unit : mg/kg WET matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
CRUSTACEANS										
Shrimps	English coast of North Sea and east coast of Irish Sea	1971-72	13	0.05	0.75	0.36	AA	70	GB	f
	Thames estuary	1971-72	21	0.10	5.5	2.1	AA	70	GB	f
	Bristol Channel, NE	1971-72	3	4.3	5.7	4.8	AA	70	GB	f
	SE	1971-72	4	2.5	4.9	3.7	AA	70	GB	f
	Severn estuary and Bristol Channel	1970-72	4	2.8	4.4	3.4	AA	21	GB	
Homarus vulgaris (Lobster)	Landed in UK	1971-72	81	<0.05	0.45	<0.10	AA	70	GB	e
Palinurus vulgaris (Crowfish)	Landed in UK	1971-72	2	0.16	0.23	0.20	AA	70	GB	e
Nephrops norvegicus (Norway lobster and Dublin Bay prawn)	Landed in UK	1971-72	13	<0.03	0.75	<0.27	AA	70	GB	e
Carcinus maenas (crab)	Severn estuary and Bristol Channel	1970-72	5	14.5	33.1	22.4	AA	21	GB	d
Cancer pagurus (crab)	Around United Kingdom	1971-72								
- Brown meat or body meat			161	<0.03	49	6.4	AA	70	GB	
- White meat			161	<0.05	0.93	0.19	AA	70	GB	
Crab										
Brown and mixed meat		1970 ?	6	2.5	8.6	6.4	Col	71	GB	
White meat		1970 ?	1			0.02	Col	71	GB	
Brown + white meat		1970 ?	29	0.17	9.4	5.4	Col	71	GB	
Dressed meat		1970 ?	3	3.9	10	5.9	Col	71	GB	

Element : Cadmium

Medium : Sea organisms - Fish, birds.

Unit : mg/kg WET matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
FISH										
Various species	Distant middle distance and coastal waters of UK, excluding upper Bristol Channel	1971-72	1969	<0.03	0.75	<0.087	AA	70	GB	e.g
	Bristol Channel , NE+SE	1971-72	50	0.05	0.45	0.18	AA	70	GB	e.d
Cod, dogfish, grey mullet, rocking , shote, whiting, ray	Severn estuary and Bristol Channel	1970-72	15	0.06	0.59	0.26	AA	21	GB	
Flounder	Bristol Channel	1970-72	2	0.68	1.67	1.17	AA	21	GB	
BIRDS										
Eggs of Larus argentatus (gull)	Bristol Channel	1970-72	3	0.03	0.06	0.05	AA	21	GB	

Remarks :

a. Unless otherwise specified.
b. $\bar{X}$ = geometric mean
c. No significant difference with Fucus sampled in 1961 at the same places .
d. Places of sampling : N. = north shore of Severn estuary and Bristol Channel
S. = south shore of Severn estuary and Bristol Channel
E. = eastern part, from upper estuary to Worms Head or Mumbles Head (north shore), and to Watchet or Lynton (south shore)
W. = western part, from these places to the open sea .
e. On edible portion of the sample as received .
f. Whole, unpeeled shrimps . Cd in tail (edible portion) : <20% of total
g. Distant waters : Norvegian coast, Berents Sea, Ireland;
Middle distant Waters : Mid North Sea, Southern North Sea .

Element : Cadmium
Medium : Drinking water
Unit : µg/l

Location of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
	Surface waters									
Lindau	Bodensee (40m)	Jun.-Dec.72	7	0.6	2.0	1.1	A AA	45	D	a.b
Düsseldorf	Rhine	1971-72	23	1.0	13.2	2.2	AA	46	D	b
Rotterdam- Honingerdijk	Rhine	Mar.72	1			<0.1		4	NL	b
Andijk	Ijsselmeer	Mar.72	1			0.1		4	NL	b
	Dam of Esch/Sûre	Apr.-Sep.72	3		<1		Pol.or.AA	9	L	b
	Groundwaters									
Mainz	19 Groundwaters	1971-73	47	0.8	5.7	3	AA	51	D	
Mainz	Mainwater	1971-73	24	1.2	9.0	3	AA	51	D	
Wiesbaden	5 Deep galleries	1971-73	42	<0.1	1.0	1	AA	51	D	
Wiesbaden	5 Surface galleries	1971-73	7	<0.1	1.8	~0.3	AA	51	D	
Wiesbaden	6 Leak galleries	1971-73	11	<0.1	1.6	~0.5	AA	51	D	
Haarlem	Dunes	Mar.73	1			<0.1		4	NL	
	Dunes recharged with Rhine water									
Castricum(The Netherlands)		Mar.72	1			<0.1		4	NL	
Amsterdam Leiduin		Mar.72	1			<0.1		4	NL	
Den Haag		Mar.72	1			<0.1		4	NL	

Remarks :

a- Daily samples composited into a monthly sample
b- Purified.

Element : Cadmium

Medium : Food - Beverages

Unit : mg/kg fresh weight as presented (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
BEVERAGES									
Soft drinks (bottled)	United Kingdom	1971-72	8	<0.002	0.005	<0.003	AA	70 GB	
Soft drinks (canned)	United Kingdom	1971-72	5	<0.002	0.006	<0.003	AA	70 GB	
7-up	Ireland	Jan.71	1			<0.05		1 Eir	
Fanta-orange	Ireland	Jan.71	1			<0.05		1 Eir	
Coke	Ireland	Jan.71	1			<0.05		1 Eir	
Beverages	Ireland,S.and E.	1972	7		<0.05			1 Eir	
Beers (canned)	United Kingdom	1971-72	4			<0.002	AA	70 GB	
Beers and ciders(bottled)	United Kingdom	1971-72	6			<0.002	AA	70 GB	
Stout	Ireland	Mar.72	1			<0.05		1 Eir	
Spirits	United Kingdom	1971-72	10	<0.01	0.02	<0.02	AA	70 GB	
Wines	United Kingdom	1971-72	57			<0.05	AA	70 GB	
Ices (lollies,10 flavours)	United Kingdom	1971-72	10	<0.01	0.01	<0.01	AA	70 GB	

Element : Cadmium

Medium : Food - Fish and fish products

Unit : mg/kg material as presented (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
FISH AND FISH PRODUCTS										
Fresh										
Crab-white meat of legs	Dublin, Ireland	1971-72	6	0.02	0.6	0.23		2	Eir	
-brown meat (digestive glands)	Dublin, Ireland	1971-72	6	0.9	15.9	3.6		2	Eir	
Canned or bottled										
Crab paste	Ireland	Mar.1972	2	0.2	0.6	0.4		1	Eir	
	Ireland	Apr.1072	2	1.3	1.4	1.35		2	Eir	
	Ireland, S. and W.	1972	16	<0.05	3.5	0.88		1	Eir	
	United Kingdom	1971-72	2	1.2	1.7	1.4	AA	70	GB	
Cheese spread and crab	Ireland	Mar.1972	1			0.1		1	Eir	
	Ireland	Apr.1972	1			0.2		2	Eir	
Dressed crab	Ireland	Mar.1972	1			0.8		1	Eir	
Dressed crab (Norvegian)	Ireland	Apr.1972	1			1.1		2	Eir	
Dressed crab (contains brown meat)	United Kingdom	1971-72	2	1.3	6.4	3.8	AA	70	GB	
Crab meat (Canada)	Ireland	Apr.1972	1			0.02		2	Eir	
Crab meat (white meat)	United Kingdom	1971-72	9		<0.01		AA	70	GB	
Salmon and shrimp paste	Ireland	Mar.1972	1			0.1		1	Eir	
Prawns	Ireland	Mar.1972	1			<0.05		1	Eir	
Prawn curry	Ireland	Mar.1972	1			<0.05		1	Eir	
Salmon and prawns	Ireland, S. and W.	1972	12		<0.05			1	Eir	
Lobster spread	Ireland, S.	1972	1			0.80		1	Eir	

Element : Cadmium
Medium : Food- Fish and fish products
Unit : mg/kg material as presented (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
FISH AND FISH PRODUCTS										
Canned or bottled										
Lobster (canned)										
- claw meat	United Kingdom	1971-72	3			<0.1	AA	70	GB	
- tail meat	United Kingdom	1971-72	1			<0.1	AA	70	GB	
- mixed claw and tail meat	United Kingdom	1971-72	2	0.90	1.3	1.1	AA	70	GB	
Salmon	Ireland	Mar.1972	1			<0.05		1	Eir	
Salmon spread	Ireland	Jan.1971	1			<0.05		1	Eir	
Sardines (Canadian)	Ireland	Jan.1971	1			<0.05		1	Eir	
Sardines and tomato	Ireland	Mar.1972	1			<0.05		1	Eir	
Sardines	United Kingdom	1971-72	10	0.10	0.30	0.18	AA	70	GB	
Fish pastes(salmon,tuna,prawns, shrimps,sardines)	Ireland,S.E. and W.	1972	13	<0.05	0.20	0.05		1	Eir	
Fish and macaroni	Ireland	Mar.1972	1			<0.05		1	Eir	
Frozen										
White crab meat	Ireland	Apr.1972	1			0.15		2	Eir	
Cod fillets	United Kingdom	1971-72	1			0.01	AA	70	GB	
Fish fingers(breaded)	United Kingdom	1971-72	1			0.02	AA	70	GB	
Kippers (cooked in plastic bag)	United Kingdom	1971-72	1			0.01	AA	70	GB	
Miscellaneous										
Composite fish componant of the UK diet	United Kingdom	1971-72	40	<0.01	0.06	<0.02	AA	70	GB	

Element : Cadmium

Medium : Milk and milk products

Unit : mg/kg material as presented (a)

Cd.8.4

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
MILK AND MILK PRODUCTS										
Evaporated and condensed milk	United Kingdom	1971-72	5	<0.01	0.02	<0.01	AA	[illegible]	GB	
Malted milk	United Kingdom	1971-72	2	0.07	0.08	0.08	AA	[illegible]	GB	
Milk powders	United Kingdom	1971-72	2	0.01	0.06	0.03	[illegible]	[illegible]	GB	
Cream(canned)	United Kingdom	1971-72	1			0.01	[illegible]	[illegible]	GB	
Cream(bottled)	United Kingdom	1971-72	1			0.01	[illegible]	[illegible]	GB	
Butter (6 types)	United Kingdom	1971-72	10	<0.01	0.07	<0.03	AA	[illegible]	GB	
Cheese (12 varieties)	United Kingdom	1971-72	12	<0.01	0.11	<0.04	AA	[illegible]	GB	
Ices (cream,6 flavors)	United Kingdom	1971-72	6	<0.01	0.03	<0.02	AA	70	Gb	
Milk products	F.R.G.			0.05	0.23			50	V	b
Composite milk component of the UK diet	United Kingdom ,15 towns	1972	30	<0.001	0.011	<0.002	AA	70	GB	

Element : Cadmium
Medium : Food- Meat and meat products
Unit : mg /kg material as presented (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
MEAT AND MEAT PRODUCTS									
Beef									
Beef - liver	United Kingdom	1971-72	4	<0.01	0.11	0.05	AA	70 GB	
- kidney	United Kingdom	1971-72	4	0.22	0.77	0.50	AA	70 GB	
- other meat	United Kingdom	1971-72	8	<0.01	0.04	0.03	AA	70 GB	
Beef, M.longi . dorsi	Bavaria,F.R.G.	1970-71	23	0.016	0.072	0.041	NA	60 D	
Veal, M.longi.dorsi	Bavaria ,F.R.G.	1970-71	22	0.023	0.190	0.079	NA	60 D	
Beef, kidney	The Netherlands	Jan.-Aug.72	36	0.02	1.68	0.53	W.ox. AA	40 NL	
Stewed steak	Ireland	Jan.1971	1			<0.05		1 Eir	
Beef dinner	Ireland	Jan.71,Mar.72	2		<0.05			1 Eir	
Beef spread	Ireland	Mar.1972	1		<0.05			1 Eir	
Corned beef	Ireland	Mar.1972	1			<0.05		1 Eir	
Pork									
Pork - liver	United Kingdom	1971-72	4	<0.01	0.11	<0.05	AA	70 GB	
- kidney	United Kingdom	1971-72	4	<0.01	0.59	0.24	AA	70 GB	
- other meat	United Kingdom	1971-72	4	0.02	0.05	0.03	AA	70 GB	
Pork, M.longi.dorsi	Bavaria ,F.R.G.	1970-71	60	0.011	0.079	0.025	NA	60 D	
Pork, kidney	The Netherlands	Jan.-Aug.72	33	0.21	2.32	0.90	W.ox. AA	40 NL	
Lard (2 types)	United Kingdom	1971-72	2	0.02	0.04	0.03	AA	70 GB	
Pork luncheon	Ireland	Jan.1971	1			<0.05		1 Eir	

Element : Cadmium

Medium : Food- Meat and meat products

Unit : mg/kg material as presented (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
MEAT AND MEAT PRODUCTS									
Lamb									
Lamb- liver	United Kingdom	1971-72	4	<0.01	0.06	0.02	AA	70 GB	
- kidney	United Kingdom	1971-72	4	0.02	0.71	0.27	AA	70 GB	
- other meat	United Kingdom	1971-72	4	0.01	0.03	0.02	AA	70 GB	
Lamb dinner	Ireland	Jan.1971	1			<0.05		1 Eir	
Chicken									
Chicken - liver	United Kingdom	1971-72	1			0.06	AA	70 GB	
- other meat	United Kingdom	1971-72	2	0.01	0.03	0.02	AA	70 GB	
Chicken (canned)	United Kingdom	1971-72	1			0.02	AA	70 GB	
Chicken, liver	The Netherlands	Jan.-Aug.72	33	0.06	1.57	0.35	W.ox. AA	40 NL	
Eggs	United Kingdom	1971-72	10	<0.01	0.03	<0.01	AA	70 GB	
Duck -liver	United Kingdom	1971-72	1			<0.01	AA	70 GB	
Rabbit - liver	United Kingdom	1971-72	1			0.01	AA	70 GB	

Element : Cadmium

Medium : Food - Meat and meat products

Unit : mg/kg material as presented (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
Miscellaneous										
Muscle	F.R.G.	1971-72	15		<0.005		AA	55	D	b
			6	0.01	0.08	0.04	AA	55	D	b
Organs	F.R.G.	1971-72	33	0.02	0.73	0.13	AA	55	D	b
Meat products (faggots), frozen	United Kingdom	1971-72	1			0.03	AA	70	GB	
Meat products (4 types), canned	United Kingdom	1971-72	7	<0.01	0.04	0.03	AA	70	GB	
Tinned meat (products including pastes)	Ireland, S. and W.	1972	21		<0.05			1	Eir	
Turkey and tongue spread	Ireland	Jan.71, Mar.72	2			<0.05		1	Eir	
Composite meat and fish component of the UK diet	United Kingdom, 15 towns	1971-72	42	<0.01	0.09	<0.02	AA	70	GB	

Element : Cadmium

Medium : Food- Cereals and cereal products

Unit : mg/kg material as presented (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
CEREALS AND CEREAL PRODUCTS										
Maize	F.R.G. Experimental field			0.07	0.33			50	D	b
Cereal products	F.R.G.			0.013	0.40			50	D	b
Flour (white)	United Kingdom	1971-72	9	<0.01	0.05	<0.03	AA	70	GB	
Flour (wholemeal,etc)	United Kingdom	1971-72	6	0.02	0.13	0.07	AA	70	GB	
Bread (white)	United Kingdom	1971-72	14	<0.01	0.04	0.02	AA	70	GB	
Bread (wholemeal,etc)	United Kingdom	1971-72	7	0.02	0.04	0.03	AA	70	GB	
Corn (frozen)	United Kingdom	1971-72	3	0.01	0.08	0.03	AA	70	GB	
Corn (canned)	United Kingdom	1971-72	1			0.08	AA	70	GB	
Wheatgerm	United Kingdom	1971-72	2	0.10	0.13	0.12	AA	70	GB	
Composite cereal component of the UK diet	United Kingdom,15 towns	1971-72	42	<0.01	0.10	<0.03	AA	70	GB	

Element : Cadmium
Medium : Food- Vegetables
Unit : mg/kg material as presented (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
VEGETABLES										
Fresh										
Beans	Ireland	Jan.1971	1		<0.05			1	Eir	
Brussels sprouts	United Kingdom	1971-72	16	0.01	0.11	0.03	AA	70	GB	
	Belgium, experimental farm	Jan.1973	2	0.37	0.41	0.39	AA	32	B	
Cabbages	United Kingdom	1971-72	23	0.01	0.15	0.05	AA	70	GB	
Carrots	United Kingdom	1971-72	14	0.03	0.22	0.09	AA	70	GB	
	Ireland	Jan.71, Mar.72	2		<0.05			1	Eir	
Celery	Belgium, experimental farm	Jan.1973	4	0.08	0.21	0.30	AA	32	B	
Chicory Witloof	Belgium, experimental farm	Jan.1973				0.08	AA	32	B	
Leeks	United Kingdom	1971-72	4	0.02	0.09	0.04	AA	70	GB	
	Belgium exprimental farm	Jan.1973				0.11	AA	32	B	
Mushrooms	United Kingdom	1971-72	6	0.01	0.04	0.02	AA	70	GB	
Onions	United Kingdom	1971-72	11	0.01	0.09	0.04	AA	70	GB	
	Belgium, experimental farm	Jan.1973				0.14	AA	32	B	
Peas	Ireland	Jan.1971	1			<0.05		1	Eir	
Potatoes	United Kingdom	1971-72	19	0.01	0.17	0.08	AA	70	GB	
Rhubarb	United Kingdom	1971-72	5	0.01	0.04	0.02	AA	70	GB	
Scorzonera	Belgium, exprimental farms	Jan.1973	3	0.15	0.28	0.20	AA	32	B	

Element : Cadmium

Medium : Food- Vegetables

Unit : mg/kg material as presented (a)

Cd.8.10

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
VEGETABLES										
Fresh										
Swedes	United Kingdom	1971-72	8	0.01	0.08	0.05	AA	70	GB	
Tomatoes	United Kingdom	1971-72	10	0.01	0.08	0.02	AA	70	GB	
	Belgium, exprimental farm	Jan. 1973				0.04	AA	32	B	
Watercress	United Kingdom	1971-72	4	0.01	0.03	0.02	AA	70	GB	
Various vegetables	F.R.G.			0.03	0.32			50	D	b
Frozen										
Broad beans	United Kingdom	1971-72	3	<0.01	0.10	<0.04	AA	70	GB	
Broccoli	United Kingdom	1971-72	3	0.02	0.10	0.05	AA	70	GB	
Brussels sprouts	United Kingdom	1971-72	3	0.02	0.09	0.05	AA	70	GB	
Green beans	United Kingdom	1971-72	5	<0.01	0.10	<0.04	AA	70	GB	
Peas	United Kingdom	1971-72	6	<0.01	0.09	<0.02	AA	70	GB	
Spinach	United Kingdom	1971-72	4	<0.04	0.13	<0.08	AA	70	GB	
Canned										
Asparagus	United Kingdom	1971-72	2	0.15	0.18	0.16	AA	70	GB	
Baked beans	United Kingdom	1971-72	7	<0.01	0.03	<0.01	AA	70	GB	
Carrots	United Kingdom	1971-72	10	<0.01	0.02	<0.01	AA	70	GB	
Mushrooms	United Kingdom	1971-72	2	0.03	0.19	0.11	AA	70	GB	
Peas	United Kingdom	1971-72	10	0.05	0.09	0.07	AA	70	GB	
Rhubarb	United Kingdom	1971-72	6		<0.01		AA	70	GB	

Element : Cadmium

Medium : Food- Vegetables

Unit : mg/kg material as presented(a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
VEGETABLES										
Canned										
Spinach	United Kingdom	1971-72	7	0.003	0.18	0.09	AA	70	GB	
Tomatoes	United Kingdom	1971-72	4		<0.01		AA	70	GB	
Carrots,peas,beans,	Ireland, S. and E.	1972	6		0.05			1	Eir	
Miscellaneous										
Vegetable juice	F.R.G.			0.004	0.50			50	D	b
Vegetable oil	F.R.G.			0.05	0.20			50	D	b
Soja products	F.R.G.			0.01	0.50			50	D	b
Flaxgrain products	F.R.G.			0.21	0.42			50	D	b
Composite vegetables component of the UK diet :										
- Root vegetables	United Kingdom,15 towns	1971-72	42	<0.01	0.07	<0.02	AA	70	GB	
- Green vegetables	United Kingdom,15 towns	1971-72	42	<0.01	0.03	<0.01	AA	70	GB	

Element : Cadmium

Medium : Food- vegetables, special case

Unit : mg/kg fresh material

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
VEGETABLES									
Special case	Vegetables grown near a metal refining plant, U.K. Distance (in miles) from refinery :							70 GB	
Leafy vegetables (cabbage, letture, Brussels sprouts)	up to 1	Oct.71-Feb.72	12	0.04	1.3	0.33			c
	1 - 1 1/2	Oct.71-Feb.72	7	0.05	0.2	0.11			c
	1 1/2- 2	Oct.71-Feb.72	11	0.05	0.4	0.11			c
	8 (control)	Oct.71-Feb.72	6	0.05	0.4	0.07			c
	up to 1	Feb.72-Oct.72	18	0.0	2.5	0.45			c
	1 - 1 1/2	Feb.72-Oct.72	17	0.0	5.7	0.76			c
	1 1/2- 2	Feb.72-Oct.72	17	0.0	2.7	0.40			c
	8 (control)	Feb.72-Oct.72	18	0.0	0.84	0.11			c
Outer leaves	up to 1		8	0.45	2.0	1.1			
	1 - 1 1/2		10	0.10	1.6	0.60			
	2 - 12		15	0.05	0.60	0.20			
Inner leaves	up to 1		7	0.02	0.50	0.20			
	1 - 1 1/2		3	0.0	0.15	0.08			
	2- 12		10	0.0	0.30	0.06			

Element : Cadmium
Medium : Food - vegetables ,special case
Unit : mg/kg fresh material

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
VEGETABLES									
Special case (continuation)	Distance (in miles) from refinery :								
Root vegetables (parsnip; beetroot, carrot, potato)	up to 1	Feb.72-Oct.72	3	0.10	0.7	0.30			c
	1 - 1 1/2	Feb.72-Oct.72	3	0.05	1.0	0.70			c
	1 1/2- 2	Feb.72-Oct.72	4	0.05	0.1	0.07			c
	8 (control)	Feb.72-Oct.72	2			0.05			c

Element : Cadmium

Medium : Food- Fruit

Unit : mg/kg material as presented (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Me	Ref.		Remarks.
FRUIT										
Fresh										
Apples	Belgium, experimental farms	Jan. 1973	4	0.16	0.18	0.17	AA	32	B	
2 Apples, 3 pears	Belgium, experimental farms	Jan. 73	5	0.10	0.20	0.16	AA	32	B	
Bilberry	F.R.G.	1971	1			0.01	AA	55	D	b
Pears - whole fruit	United Kingdom	1971-72	6	0.01	0.09	0.03	AA	70	GB	
- skin	United Kingdom	1971-72	11	0.01	0.04	0.02	AA	70	GB	
- flesh	United Kingdom	1971-72	11	0.01	0.09	0.02	AA	70	GB	
Plums	United Kingdom	1971-72	5	<0.01	0.04	<0.02	AA	70	GB	
Fruit	F.R.G.			0.004	0.35			50	D	b
Canned										
Apples	United Kingdom	1971-72	6	<0.01	0.04	<0.02	AA	70	GB	
Apricots	United Kingdom	1971-72	3			<0.01	AA	70	GB	
	F.R.G. imported from South Africa	1971	1			0.016	AA	55	D	b
Damsons	United Kingdom	1971-72	2			<0.01	AA	70	GB	
Grapefruit	United Kingdom	1971-72	4			0.01	AA	70	GB	
Oranges (mandarin)	United Kingdom	1971-72	3			<0.01	AA	70	GB	
Peaches	United Kingdom	1971-72	4			<0.01	AA	70	GB	
Pears	F.R.G. imported from Italy and U.S.A.	1971	2	0.006	0.008	0.007	AA	55	D	b
Pineapples	United Kingdom	1971-72	5	<0.01	0.03	<0.01	AA	70	GB	

Element : Cadmium

Medium : Food-Fruit

Unit : mg/kg material as presented (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
FRUIT										
Canned										
Plums (3 varieties)	United Kingdom	1971-72	11	<0.01	0.01	<0.01	AA	70	GB	
Prunes	United Kingdom	1971-72	6	<0.01	0.02	<0.01	AA	70	GB	
Miscellaneous										
Fruit juices (canned)	United Kingdom	1971-72	19	<0.01	0.02	<0.01	AA	70	GB	
Fruit juices (bottled)	United Kingdom	1971-72	7			0.05	AA	70	GB	
Fruit juices	F.R.G.			0.0006	0.40			50	D	b
Lemon juice	Ireland	Jan.1971	1			<0.05		1	Eir	
Almond essence	Ireland	Jan.1971	1			<0.05		1	Eir	
Composite fruit and preserves component of the UK diet	United Kingdom,15 towns	1971-72	42	<0.01	0.02	<0.01	AA	70	GB	

Element : Cadmium

Medium : Food- Prepared foods

Unit : mg/kg material as presented (a)

Cd.8.16

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
PREPARED FOODS										
Baby foods - dried milk	United Kingdom	1971-72	6	<0.01	0.03	<0.01	AA	70	GB	
- dried cereals	United Kingdom	1971-72	5	<0.01	0.05	<0.02	AA	70	GB	
- other dried	United Kingdom	1971-72	16	<0.01	0.07	<0.03	AA	70	GB	
Baby food (canned)	United Kingdom	1971-72	55	<0.01	0.04	<0.01	AA	70	GB	
Baby food (in jars)	United Kingdom	1971-72	23	<0.01	0.02	<0.01	AA	70	GB	
Baby food	Ireland	1972	3		<0.05			1	Eir	
Fruit dessert	Ireland, S. and E.	1972	5		<0.05			1	Eir	
Jam	F.R.G.			0.01	0.10			50	D	b
Jellies (7 flavours)	United Kingdom	1971-72	7	<0.01	0.10	<0.03	AA	70	GB	
Meat pies and puddings (steak and kidney) (canned)	United Kingdom	1971-72	2	0.04	0.12	<0.08	AA	70	GB	
Seasoning	Ireland	Jan.1971	1		<0.05			1	Eir	
Sauces	Ireland, S.and W.	1972	4	<0.05	0.06	0.05		1	Eir	
Sauces,5 types(bottled)	United Kingdom	1971-72	6	<0.01	0.02	<0.01	AA	70	GB	
Soups	F.R.G.			0.14	0.33			50	D	b
	Ireland, S. and W.	1972	6		<0.05			1	Eir	
Tomato soup	Ireland	Jan.1971	1		<0.05			1	Eir	

Element : Cadmium
Medium : Food - Prepared foods
Unit : mg/kg material as presented (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
PREPARED FOODS									
Vegetables and beef broth	Ireland	Jan.1971	1		<0.05			1 Eir	
Vegetables and bone broth	Ireland	Mar.1972	1		<0.05			1 Eir	
Vegetables and liver paste	Ireland	Mar.1972	1		<0.05			1 Eir	
Spread	Ireland	Mar.1972	1		<0.05			1 Eir	

Element : Cadmium

Medium : Food- Spices

Unit : mg/kg material as presented (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
SPICES										
Herbs	Ireland, S. and W.	1972	8	<0.05	0.06	0.05		1	Eir	
Herbs, dried, 6 types	United Kingdom	1971-72	15	0.02	3.1	0.79	AA	70	GB	
Mustard	Ireland, S. and E.	1972	2		<0.05			1	Eir	
Mustard (tube)	Ireland	Mar.1972	1		<0.05			1	Eir	
Sea salt	F.R.G.					0.08		50	D	b
Vinegar	Ireland	Jan.1971	1			<0.05		1	Eir	

Element : Cadmium
Medium : Food , miscellaneous
Unit : mg/kg material as presented (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
MISCELLANEOUS										
Agar agar	F.R.G.					0.01		50	D	b
Cooking oils (3 types)	United Kingdom	1971-72	3	<0.01	0.04	<0.03	AA	7	GB	
Margarine	United Kingdom	1971-72	3	<0.01	0.03	<0.02	AA	70	GB	
Honey	F.R.G.			0.02	0.11			50	D	b
Cocoa and drinking chocolate	United Kingdom	1971-72	2	0.04	0.14	0.09	AA	70	GB	
Coffee (instant)	United Kingdom	1971-72	3	0.04	0.08	0.07	AA	70	GB	
Meat and yeast extracts	United Kingdom	1971-72	3	<0.01	0.03	<0.03	AA	70	GB	
Yeast products	F.R.G.			0.002	2.60			50	D	b
Stock cubes (beef)	United Kingdom	1971-72	4	<0.01	0.01	<0.01	AA	70	GB	
(chicken)	United Kingdom	1971-72	3	<0.01	0.02	<0.01	AA	70	GB	
Sugar (6 types)	United Kingdom	1971-72	6	<0.01	0.03	<0.02	AA	70	GB	
Sweets and chocolates (various)	United Kingdom	1971-72	11	<0.01	0.07	<0.02	AA	70	GB	
Tea (9 different brands)	United Kingdom	1971-72	9	0.01	0.06	0.03	AA	70	GB	
Tea	Ireland, S. and W.	1972	2		<0.05			1	Eir	
Composite fats component of the UK diet	United Kingdom, 15 towns	1971-72	42	<0.01	0.25	<0.03	AA	70	GB	

Element : Cadmium

Cd.8.20

Medium : Food -Total diet

Unit : mg/kg material as presented (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
TOTAL DIET									
Total diet samples weighted mean, 5 quarters	United Kingdom, 1 to 13 towns (depending on quarter)	1971-72				0.01 to 0.02	AA	70 GB	d

Remarks :

a- Analysis made : - on material as sold in shop (ref.1 and 2)
- on edible portion of the sample as received (Ref.70)
- on wet matter (Ref.40 and 60)
- on fresh material (Ref.32)

b- Analysis probably made on material as presented, according to the results.

c- On fresh vegetables after normal preparation for eating and before cooking

d- Weighted according to the proportions of the different food groups consumed.

Element : Cadmium
Medium : Air
Unit :

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.		Ref.		Remarks
Particulate matter										
United Kingdom, 7 sampling places	1971-72	7	<0.003	<0.018			X	43	GB	µg/kg air
Federal Republic Germany :										
- München, residential area	Jun.1972	2	0.002	0.004		W.dig.		45	D	µg/m³
- Frankfurt am Main :										
- street with heavy traffic	Jul.-Dec.72	34	0.01	0.32	0.076		AA	63	D	µg/m³
- residential and office area near the city	Sep.-Dec.72	22	0.001	0.042	0.014		AA	63	D	µg/m³
- München, 6 sampling places, monthly samples	1971	44	0.5	2010	141.5		NA	56	D	µg/g particulates
Rain (+ fallout)										
United Kingdom, 1 sampling place (pure area)	1971				<17.7		X	43	GB	µg/l

Element : Cadmium

Medium : Soil

Unit : mg/kg

Cd.10

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
Soil, 0-0.3m	F.R.G., 4 places			0.07	5.00			50 D	
Garbage compost (5different)	F.R.G.			0.80	18.50			50 D	

Cr.1 (1-4) - River water
Cr.2 - Sea water
Cr.3 (1-2) - River sediments
Cr.4 - Sea sediments
Cr.5 - Fresh water organisms
Cr.7 - Drinking water
Cr.8 - Food
Cr.9 - Air
Cr.10 - Soil
Cr.11 - Miscellaneous

CHROME

[redacted]

Element : Chromium
Medium : River water
Unit : µg/l

Cr.1.1

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Danube								
- 2 places (Leipheim, Bad Abbach)	Aug.71-Nov.72	36	3.5	18	7.2	FA AA	45 D	a
- Tributary Altmühl	1969-71	25			11.6	Col.orAA	50 D	
Havel-Spree								
- Berlin	1971-72	3	0.5	5.9	2.6	AA	46 D	
Weser								
- Bremen km 366.2	Oct.71-Mar.72	6	4	8	6	AA	46,52 D	c
- Bremen	1971-72	24	0.8	7.9	4.7	AA	46 D	
Rhine								
- Bodensee- Lindau	Aug.71-Nov.72	18	2.0	10	5.8	FA AA	45 D	b
- Depth 0m	1971-73	22	1	37.2	12	AA	51 D	
- Depth 40m	1971-73	21	1	19.2	12	AA	51 D	
- Depth 60m	1971-73	22	1	55	11	AA	51 D	
- Depth 80m	1971-73	18	1	21	13	AA	51 D	
- Mannheim, km 434	1971-73	23	2	63	27	AA	51 D	
- Mainz, km 498.5	1971-73	16	4	64	17	AA	51 D	
- Wiesbaden, km 506	1971-73	31	1	20	9	AA	51 D	
- Braubach, km 581	1971-72	11	28	76	51	AA	48 D	total
Braubach, km 581	1971-72	13	1	40	20	AA	48 D	dissolved

Element : Chromium

Medium : River water

Unit : µg/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Rhine								
- Bimmen	1971-72	24	15.4	52.8	33.4	AA	46 D	
- Düsseldorf	1971-72	24	2.4	52.7	27.5	AA	46 D	
- km 698			25	90	50	AA	54 D	d
- km 865			40	180	90	AA	54 D	d
- km 643- 865		4	3	150	65	AA	54 D	
- Emmerich, km 865	1971-72	12	73	387	148	AA	48 D	total
Emmerich, km 865	1971-72	39	2.3	81	31	AA	48 D	dissolved
- Tributaries								
- Zürichsee	1971-73	3			3	AA	51 D	
- Main, Ottendorf, km 345	1971-73	15	<1	33	6	AA	51 D	
, Garstadt, km 325	1971-73	15	2	19	8	AA	51 D	
Kostheim, km 0.5	1971-73	15	2	40	24	AA	51 D	
- Regnitz, 2 sampling places	1965-72	112			30.5	Col.or AA	50 D	e
- Mosel,Koblenz, km2	1971-72	11	3	52	22	AA	48 D	total
Mosel, Koblenz, km 2	1971-72	13	3	49	13	AA	48 D	dissolved
- Sûre, Dam of Esch/Sûre, 4 places of sampling	1972	11		<5		AA	9 L	
- Sieg (mouth)		4	4	25	16	AA	54 D	

Element : Chromium

Medium : River water

Unit : µg/ℓ

Cr.1.3

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.		Ref.		Remarks
Rhine										
- Tributaries :										
- Wupper (mouth)		4	25	100	60		AA	54	D	
- Erft (mouth)		4	8	25	16		AA	54	D	
- Ruhr , part a	1971-73	53	<5	22	10	F		47	D	week averages
part b	1971-73	53	<5	47	21	F		47	D	week averages
part c	1971-73	6	6	55	20	F		47	D	month averages
part c	1971-73	6	5	30	10	F		47	D	month averages
(mouth)		4	13	80	32		AA	54	D	
- Rheinberger-Altrhein		4	13	50	30		AA	54	D	
- Lippe (mouth)		4	1	100	31		AA	54	D	
Maas										
- from French to Dutch frontiers	Sep.71-Dec.72	20	1.6	19.5	4.8	AC	AA	15	B	
- Tributaries excepting Vesdre	Sep.71-Dec.72	18	<1	8.4	<1.8	AC	AA	15	B	
- Tributary Vesdre	Sep.71-Dec.72	7	10	50	29	AC	AA	15	B	

Element : Chromium

Medium : River water

Unit : µg/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.		Ref.		Remarks
Scheldt and affluents (excepting Espierre), from French to Dutch frontiers	Sep.71-Dec.72	10		<5		AC	AA	15	B	
- at a point after affluent Espierre	Sep.71-Dec.72	2	400	960	660	AC	AA	15	B	
- affluent Espierre	Sep.71-Dec.72	1		12000		AC	AA	15	B	
Yser and affluents from French frontier to the sea	Sep.71-Dec.72	15		<5		AC	AA	15	B	
Belgian tributaries into the North sea	Sep.71-Dec.72	11		<5		AC	AA	15	B	
Miscellaneous										
- running water Region Wiesbaden,33 sampling places	1971-73	189	<1	2	<1		AA	51	D	

Remarks :

a- Continuous sampling for a monthly sample.
b- Daily samples composited into a monthly sample.
c- 3 times a week-samples composited into a monthly sample.
d- Composited weekly sample.
e- Tributary of Main .

Element : Chrome

Medium : Sea water

Unit : µg/l

Cr.2

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
North Sea :								
- Belgian shoreline ,12 sampling places	1971-72	48		<5		ACE AA	15 B	

Element : Chrome
Medium : River sediments
Unit : mg/kg

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks
Danube	Winter 71-72		56	581	187	AA	44	D	a
Elbe	Winter 71-72		110	242	175	AA	44	D	a
Weser	Winter 71-72		100	860	281	AA	44	D	a
Ems	Winter 71-72		101	206	134	AA	44	D	a
Rhine	Winter 71-72		33	1195	330	AA	44	D	a
- Tributaries :									
- Neckar	Winter 71-72		90	780	382	AA	44	D	a
- Main	Winter 71-72		100	441	211	AA	44	D	a
- Dam of Esch/Sûre	1972	8	15	29	22	AA?	9	L	b.c
Maas									
- from French frontier to above Liège	Sep.71-Dec.72	17	34	120	61	UV	15	B	b
- from Liège to Dutch frontier	Sep.71-Dec.72	8	74	560	204	UV	15	B	b
- tributaries excepting Vesdre	Sep.71-Dec.72	9	23	140	84	UV	15	B	b
- tributary Vesdre	Sep.71-Dec.72	10	150	1500	488	UV	15	B	b
Scheldt									
- and affluents excepting Espierre, from French frontier to above Ghent	Sep.71-Dec.72	4	54	397	322	UV	15	B	b
- Affluent Espierre + 1 place in Scheldt after Espierre	Sep.71-Dec.72	2	>1000	>2000		UV	15	B	b

Element : Chrome

Medium : River sediments

Unit : mg/kg

Cr.3.2

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks
Yser and affluents from French frontier to the sea	Sep.71-Dec.72	14	27	81	48	UV	15	B	b
Other Belgian tributaries into the North Sea	Sep.71-Dec.72	6	61	200	115	UV	15	B	b
Conway (Wales)	1969	143	60	100	80		26	GB	d
- Conway (Wales) estuary	1969	5	40	85	66		26	GB	d
- Tributaries from mineralized area (West , former mining activity)	1969	14	40	130	72		26	GB	d
- Tributaries from unmineralized area (East)	1969	153	20	200	77		26	GB	d

Remarks :

a- On clay fraction <2 µm . Sedimentair clay as comparison : 96

b- On dry matter

c- 2 sampling places + sediment on the filters of the water purification plant.

d- On 80- mesh fraction .

Element : Chrome

Medium : Sea sediments

Unit : mg /kg

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Baltic Sea								
- Flensburg fjord								
- Western part, 3 sampling places	May -Oct.70	20	9	55	27	AA	62 DK	On dry matter
- Eastern part (sea side), 4 sampling places	May -Oct.70	15	0.4	30	21	AA	62 DK	On dry matter
North Sea								
- Belgian shoreline, 11 sampling places	1971-72	43	4	120	38	UV	15 B	On dry matter
Irish Sea								
- Conway Bay, offshore	1969	3	16	60	36		26 GB	On 80-mesh fraction

Element : Chrome

Medium : Fresh water organisms

Unit : mg/kg DRV matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
WATERPLANTS									
Macrophytes	Dam of Esch/Sûre	Jun.-Sep.72	2	< 7	7			9 L	
FISH									
Various species	Dam of Esch/Sûre	Jun.-Sep.72	2		<5			9 L	
	Ruhr	1965-72	16	< 5	7	5		47 D	

Element : Chrome

Medium : Drinking water

Unit : µg/l

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
	Surface waters								
Lindau	Bodensee (40m)	Jun.-Dec.72	7	2.0	10	4.7	A AA	45 D	a
Düsseldorf	Rhine	1971-72	23	0.1	4.5	2.0	AA	46 D	
	Dam of Esch/Sûre	1972	3		<5		AA	9 L	b
	Groundwaters								
Mainz	19 groundwaters	1971-73	45	2	48	5	AA	51 D	
Mainz	Mainwater	1971-73	23	1	9	5	AA	51 D	
Wiesbaden	5 Deep galleries	1971-73	42			<1	AA	51 D	
Wiesbaden	5 Surface galleries	1971-73	7			<1	AA	51 D	
Wiesbaden	6 Leak galleries	1971-73	11			<1	AA	51 D	

Remarks :

a- Daily samples composited into a monthly sample

b- Purified.

Element : Chrome Cr.s

Medium : Food

Unit : mg/kg

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
MEAT									
Pork , M.longi.dorsi	Bavaria,F.R.G.	1970-71	47	0.006	0.30	0.058	NA	60 D	a
Beef,M.longi.dorsi	Bavaria,F.R.G.	1970-71	19	0.009	0.17	0.061	NA	60 D	a
Veal,M.longi.dorsi	Bavaria,F.R.G.	1970-71	17	0.007	0.023	0.012	NA	60 D	a
CEREALS									
Maize	F.R.G.Experimental field			0.34	2.6			50 D	
VEGETABLES	F.R.G.			0.83	1.55			50 D	

Remarks :

a- On wet matter.

[redacted]

Element : Chrome

Medium : Air

Unit :

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Particulate matter								
United Kingdom, 7 sampling places	1971-72		0.001	0.014	0.006	NA	43 GB	µg/kg air
Federal Republic Germany :								
- München ,residential area	Jun.1972	2	0.010	0.015		W.dig.	45 D	µg/m³
- München, 6 sampling places, monthly samples	1971	52	5.8	206	78.8	NA	56 D	µg/g particulates
Rain (+ fallout)								
United Kingdom, 1 sampling place (pure area)	1971				2.9			µg/ℓ

Element : Chrome

Medium : Soil

Unit : mg/kg

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
Soil, 0- 0.3m	F.R.G., 4 places			0.06	4.55			50	D	
Garbage compost (5 different)	F.R.G.			3.10	1000			50	D	
Loess formation, in a forest 5 layers to 1m depth	Belgium, Meerdael	1964	5	60	101	82	UV	32	B	
Loess formation, in a semi-industrial region 6 layers to 1.2m depth	Belgium, Halle	1964	6	79.5	101	89	UV	32	B	
Sandy soil under pines 3 layers to 0.2-0.28 m depth	Belgium, Bokrijk	1970	6	35.6	57.6	42.3	UV	32	b	
Sandy soil, cultivated	Belgium, Bredene	1968	2	67	73	70	UV	32	b	
Garden soil with humus	Belgium, Meisse	1968	5	52	71	63	UV	32	b	

Element : Chrome
Medium : Miscellaneous
Unit : mg/kg DRY matter

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
PLANTS								
Bredene, Belgium - Sandy soil, cultivated								
- Meadow grass	1968	1			2	UV	32 B	
	1970	3	2	18	9.7	UV	32 B	
- Wheat	1968	1			<1	UV	32 B	
- Barley	1868	1			<1	UV	32 B	
Vicinity of a metallurgical plant, Belgium								
- Pine-needles, spinach, rhubarb	1972	4	3	13	6.75	UV	32 B	

Co.1 (1-3) - River water
Co.2 - Sea water
Co.3 (1-2) - River sediments
Co.4 - Sea sediments
Co.5 - Fresh water organisms
Co.7 - Drinking water
Co.8 - Food
Co.9 - Air
Co.10 - Soil

COBALT

[redacted]

Element : Cobalt
Medium : River water
Unit : µg/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.		Ref.		Remarks
Danube										
- 2 places (Leipheim, Bad Abbach)	Aug.71-Nov.72	36	2.0	8.8	5.25	FA	AA	45	D	a
Havel-Spree, Berlin	1971-72	3	3.0	5.7	4.5		AA	46	D	
Weser										
- Bremen	1971-72	24	5.7	17.0	10.4		AA	46	D	
Rhine										
- Bodensee - Lindau	Aug.71-Nov.72	18	2.0	5.5	3.5	FA	AA	45	D	b
- Depth 0m	1971-73	22	2	9	9		AA	51	D	
- Depth 40m	1971-73	21	2	64	11		AA	51	D	
- Depth 60m	1971-73	22	2.6	22	7		AA	51	D	
- Depth 80m	1971-73	18	2	12	7		AA	51	D	
- Mannheim, km 435	1971-73	23	3	14	8		AA	51	D	
- Mainz , km 498.5	1971-73	16	5	13	9		AA	51	D	
- Wiesbaden, km 506	1971-73	33	3	21	11		AA	51	D	
- Braubach , km 581	1971-72	11	2	9	6		AA	48	D	total
Braubach, km 581	1971-72	13	1	6	3		AA	48	D	dissolved

Remarks :

a- Continuous sampling for a monthly sample

b- Daily samples composited into a monthly sample.

Element : Cobalt

Medium : River water

Unit : µg/l

Co.1.ℓ

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Rhine								
- Bimmen	1971-72	24	6.8	20.0	11.1	AA	46 D	
- Düsseldorf	1971-72	24	4.5	14.0	8.7	AA	46 D	
- Emmerich, km 865 (Dutch frontier)	1971-72	12	3	17	11	AA	48 D	total
Emmerich, km 865 (Dutch frontier)	1971-72	39	1.2	12	5	AA	48 D	dissolved
- Tributaries :								
- Zürichsee	1971-73	3			4	AA	51 D	
- Main, Ottendorf, km 545	1971-73	16	3	14	8	AA	51 D	
Garstadt, km 325	1971-73	15	6	13	8	AA	51 D	
Kostheim, km 0.5	1971-73	15	4	15	13	AA	51 D	
- Mosel, Koblenz, km 2	1971-72	11	2	17	8	AA	48 D	total
Mosel, Koblenz, km 2	1971-72	13	0.3	14	5	AA	48 D	dissolved
- Sûre, Dam of Esch/Sûre, 4 sampling places	1972	11		<5		AA	9 L	

Element : Cobalt

Medium : River water

Unit : µg/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.		Ref.		Remarks
Maas										
- and affluents, from French to Dutch frontiers	Sep.71-Dec.72	27	<2	7	~3	AC	AA	15	B	
Yser										
- and affluents, from French frontier to the sea	Sep.71-Dec.72	15		<5		AC	AA	15	B	
Belgian tributaries into the North Sea	Sep.71-Dec.72	11	<5	7	<5	AC	AA	15	B	
Conway (Wales)										
- above tidal influence	1969	8			<0.05	I.ex	AA	26	GB	
- below tidal influence	1969	16	<0.05	0.07	<0:05	I.ex	AA	26	GB	
- Tributaries from mineralized area (West, former mining activity)	1969	12	<0.05	0.30	<0.05	I.ex	AA	26	GB	
- Tributaries from unmineralized area (East)	1969	22	<0.05	0.19	<0.05	I.ex	AA	26	GB	
Miscellaneous										
- Running water Region Wiesbaden, 33 sampling places	1971-73	176	<1	18	<3		AA	51	D	

Element : Cobalt

Medium : Sea water

Unit : µg/ℓ

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Irish Sea :								
- Conway Bay (Wales)	1969				<0.05	I.ex AA	26 GB	
North Sea :								
- Belgian shoreline, 12 sampling places	1971-72	48		<5		ACE AA	15 B	

Element : Cobalt
Medium : River sediments
Unit : mg/kg

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.		Ref.		Remarks
Danube	Winter 71-72		32	62	47		AA	44	D	a
Elbe	Winter 71-72		40	60	51		AA	44	D	a
- Elbe, Hamburg harbour	Feb.73	12	4	53		A.dig	AA	53	D	b
Weser	Winter 71-72		41	70	57		AA	44	D	a
Ems	Winter 71-72		44	68	54		AA	44	D	a
Rhine	Winter 71-72		17	43	26		AA	44	D	a
- Tributaries :										
- Neckar	Winter 71-72		35	64	55		AA	44	D	a
- Main	Winter 71-72		40	65	51		AA	44	D	a
- Dam of Esch/Sûre	Apr.-Sep.72	8	12	33	23		AA	9	L	b.d
Maas and affluents from French to Dutch frontiers	Sep.71-Dec.72	46	3	26	12		UV	15	B	b
Scheldt and affluents from French frontier to above Ghent	Sep.71-Dec.72	6	2.5	13	6.3		UV	15	B	b
Yser and affluents from French frontier to the sea	Sep.71-Dec.72	14	4	15	6.8		UV	15	B	b
Other Belgian tributaries into the North Sea	Sep.71-Dec.72	6	5	13	7.5		UV	15	B	b

Element : Cobalt

Medium : River sediments

Unit : mg/kg

Co.3.2

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Conway (Wales)	1969	143	20	130	50		26 GB	c
- Conway (Wales), estuary	1969	5	13	40	22		26 GB	c
- Tributaries from mineralized area (West , former mining activity)	1969	14	20	130	81		26 GB	c
- Tributaries from unmineralized area (East)	1969	153	10	1300	70		26 GB	c

Remarks :

a- On clay fraction <2 µm . Sedimentair clay, as comparison : 19

b- On dry matter

c- On 80-mesh fraction

d- 2 sampling places + sediment on the filters of the water purification plant

Element : Cobalt
Medium : Sea sediments
Unit : mg/kg

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks
North Sea									
- Belgian shoreline, 11 sampling places	1971-72	43	0.3	7.6	2.6	UV	15	B	On dry matter
Irish Sea									
- Conway Bay, offshore	1969	3	5	13	9		26	GB	On 80-mesh fraction

Element : Cobalt

Medium : Fresh water organisms

Unit : mg/kg DRY matter

Co.5

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
WATERPLANTS									
Macrophytes	Dam of Esch/Sûre	Jun.-Sep.72	2	<5	5			9 L	
FISH									
Various species	Dam of Esch/Sûre	Jun.-Sep.72	2	5	6	5.5		9 L	

Element : Cobalt
Medium : Drinking water
Unit : µg/ℓ

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
	Surface waters								
Lindau	Bodensee (40m)	Jun.-Dec.72	7	1.0	4	3.5	A AA	45 D	a
Düsseldorf	Rhine	1971-72	23	4.5	8.3	6.6	AA	46 D	
	Dam of Esch/Sûre	1972	3		<5		AA	9 L	b
	Groundwaters								
Mainz	19 groundwaters	1971-73	47	4	25	11	AA	51 D	
Mainz	Mainwater	1971-73	24	4.8	40	11	AA	51 D	
Wiesbaden	5 Deep galleries	1971-73	40	<1	5	<1	AA	51 D	
Wiesbaden	5 Surface galleries	1971-73	7	<1	7	<1	AA	51 D	
Wiesbaden	6 Leak galleries	1971-73	11	<1	7	<3	AA	51 D	

Remarks :
a- Daily samples composited into a monthly sample .
b- Purified.

Element : Cobalt

Medium : Food

Unit : mg/kg

Co.8

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
MILK PRODUCTS										
Butter	The Netherlands	1970 ?	12		<0.002		NA	34	NL	a
MEAT										
Pork,M.longi.dorsi	Bavaria,F.R.G.	1970-71	60	0.002	0.016	0.007	NA	60	D	b
Beef,M.longi.dorsi	Bavaria,F.R.G.	1970-71	19	0.004	0.017	0.011	NA	60	D	b
Veal,M.longi.dorsi	Bavaria,F.R.G.	1970-71	19	0.002	0.006	0.003	NA	60	D	b

Remarks :

a- On commercial matter

b- On wet matter

Element : Cobalt

Medium : Air

Unit :

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Particulate matter								
United Kingdom, 7 sampling places	1971-72		0.0001	0.0048	0.0009	NA	43 GB	µg/kg air
Federal Republic Germany :								
- München, residential area	Jun.1972	2	0.001	0.002		W.dig.	45 D	µg/m³
- München,6 sampling places, monthly samples	1971	52	2.3	54.6	20.6	NA	56 D	µg/gparticulate
Rain (+ fallout)								
United Kingdom, 1 sampling place (pure area)	1971				0.25	NA	43 GB	µg/ℓ

Element : Cobalt

Medium : Soil

Unit : mg/kg

Co.10

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
Loess formation , in a semi-industrial region 6 layers to 1.2 m depth	Belgium, Halle	1964	6	5.1	12.4	7.8	UV	32	B	
Sandy soil under pines, 3 layers to 0.2-0.28 m depth	Belgium, Bokrijk	1970	6	<0.5	2.2	<1.2	UV	32	B	
Sandy soil, cultivated	Belgium, Bredene	1968	2	10	12	11	UV	32	B	
Garden soil with humus	Belgium, Meisse	1968	5	12	17	15	UV	32	B	

Cu.1 (1-5) - River water
Cu.2 - Sea water
Cu.3 (1-2) - River sediments
Cu.4 - Sea sediments
Cu.5 - Fresh water organisms
Cu.6 (1-3) - Sea organisms
Cu.7 - Drinking water
Cu.8 (1-4) - Food
Cu.9 - Air
Cu.10(1-2) - Soil
Cu.11 - Miscellaneous

COPPER

Element : Copper

Medium : River water

Unit : µg/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.		Ref.		Remarks
Danube										
- 2 places (Leipheim, Bad Abbach)	Aug.71-Nov.72	36	4.0	29	14	FA	AA	45	D	a
- Tributary Altmühl	1969-71	25			3	Col.or	AA	50	D	
Havel-Spree, Berlin	1971-72	3	4.4	20.2	10.1		AA	46	D	
Weser										
- Bremen km 366.2	Oct.71-Mar.72	6	3	8	6		AA	46,52	D	c
- Bremen	1971-72	24	3.1	88.0	10.1		AA	46	D	
Rhine										
- Bodensee- Lindau	Aug.71-Nov.72	18	5.0	16.0	8.3	FA	AA	45	D	b
- Depth 0m	1971-73	22	3	80	14		AA	51	D	
- Depth 40m	1971-73	21	4	29	14		AA	51	D	
- Depth 60m	1971-73	22	2	39	12		AA	51	D	
- Depth 80m	1971-73	18	2	40	27		AA	51	D	
- Mannheim, km 434	1971-73	23	4	74	26		AA	51	D	
- Mainz km 498.5	1971-73	16	9	34	24		AA	51	D	
- Wiesbaden km 506	1971-73	33	<1	46	18		AA	51	D	
- Braubach , km 581	1971-72	11	14	47	25		AA	48	D	total
Braubach , km 581	1971-72	13	8	40	12		AA	48	D	dissolved

Element : Copper

Medium : River water

Unit : µg/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.		Ref.		Remarks
Rhine										
- Bimmen	1971-72	24	31.0	68.0	42.4		A.	46	D	
- Düsseldorf	1971-72	24	9.0	73.3	22.6		AA	46	D	
- km 698			20	300	60		AA	54	D	d
- km 865			40	100	60		AA	54	D	d
- km 643-865		4	25	70	45		AA	54	D	
- Emmerich, km 865	1971-72	12	32	108	53		AA	48	D	total
Emmerich, km 865	1969-72	82	6	33	13		AA	48	D	dissolved
- Waal near Nijmegen	1972	38	26	68	42	AE	AA	41	NL	~66% in susp. water.
- Ketelmeer(near mouth of Ijssel)	1971-72	17	4	25	14	AE	AA	41	NL	
- Tributaries :										
- Zürichsee	1971-73	3			4		AA	51	D	
- Main, Ottendorf, km 345	1971-73	16	3	42	21		AA	51	D	
Garstadt, km 325	1971-73	15	6	46	21		AA	51	D	
Kostheim, km 0.5	1971-73	15	6	125	37		AA	51	D	
- Regnitz, 2 sampling places	1965-72	112			29	Col.or	AA	50	D	e
- Mosel, Koblenz, km2	1971-72	11	2	55	15		AA	48	D	total
Mosel, Koblenz, km 2	1971-72	13	1,4	42	10		AA	48	D	dissolved

Element : Copper

Medium : River water

Unit : µg/l

Cu.1.3

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.		Ref.		Remarks
Rhine										
- Tributaries :										
- Sûre, Dam of Esch/Sûre 4 sampling places	1972	11		<2			AA	9	L	
- Sieg (mouth)		4	15	45	25		AA	54	D	
- Wupper (mouth)		4	90	170	160		AA	54	D	
- Erft (mouth)		4	10	25	20		AA	54	D	
- Ruhr, part a	1971-73	53	<2	37	16	F		47	D	week averages
part b	1971-73	53	8	80	38	F		47	D	week averages
part c	1971-73	6	14	24	17	F		47	D	month averages
part d	1971-73	6	5	9	7	F		47	D	month averages
(mouth)		4	20	40	35		AA	54	D	
- Rheinberger - Altrhein		4	43	90	55		AA	54	D	
- Lippe (mouth)		4	20	60	43		AA	54	D	
Maas										
- Maas and affluents from French to Dutch frontiers	Sep.71-Dec.72	51	5	112	21	AC	GAA	15	B	
- Eijsden	1971-72	16	6	28	13	AE	AA	41	NL	
- Keizersveer	1972	7	7	12	8.4	AE	AA	41	NL	
- Grave	1970-71	10	6	20	8			5	NL	

Element : Copper

Medium : River water

Unit : µg/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.		Ref.		Remarks
Scheldt										
- Scheldt and affluents (excepting Espierres) from French to Dutch frontiers	Sep.71-Dec.72	12	<5	63	<15	ACE	AA	15	B	
- Affluent Espierres	Sep.71-Dec.72	1			150	ACE	AA	15	B	
- Tidal zone ,										
- from Rupelmonde to Dutch frontier,6 sampling places	Mar.-Jul.72	81	0.7	29.2	7.4	F	Pol	13.4,6	B	
- Dutch frontier	Nov.71	30	7	38	14	F	Pol	13.5	B	
- from Dutch frontier to the sea, 3 sampling places	Mar.72	71	2.5	130	20	F	Pol	13.6	B	
Yser , and affluents from French frontier to the sea	Sep.71-Dec.72	14	<5	12	<9	ACE	AA	15	B	
Belgian tributaries into the North sea	Sep.71-Dec.72	11	<5	9	<7	ACE	AA	15	B	
Conway (Wales)										
- above tidal influence	1969	8	1.6	3.5	2.0	I.ex	AA	26	GB	
- below tidal influence	1969	16	1.2	6.4	3.4	I.ex	AA	26	GB	
- Tributaries from mineralized area(West,former mining activity)	1969	12	0.8	5.6	2.3	I.ex	AA	26	GB	
- Tributaries from unmineralized area (East)	1969	22	0.8	4.3	2.0	I.ex	AA	26	GB	
Rivers in Wales -Mineralized area	Sep.70-Oct.71		1.3	5.5		I.ex	Pol	25	GB	
Welsh " clean" water					0.66	I.ex	Pol	25	GB	

Element : Copper

Medium : River water

Unit : µg/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Miscellaneous								
- n different surface waters in the Netherlands	1969-70	25	7	45	18	Col	30.2 NL	unfiltered
n different surface waters in the Netherlands	1970-71	29	5	40	13	Col	30.2 NL	filtered
- A canal through Walcheren island	May 71				145	Col	30.2 NL	filtered
- Running water Region Wiesbaden, 33 sampling places	1971-73	169	<1	32.5	<2	AA	51 D	

Remarks :

a- Continuous sampling for a monthly sample
b- Daily samples composited into a monthly sample
c- 3 times a week samples composited into a monthly sample
d- Composited weekly samples
e- Tributary of Main

Element : Copper
Medium : Sea water
Unit : µg/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.		Ref.		Remarks
West of Scotland, Atlantic Ocean	1970	5	0.05	0.80	0.26	FE	AA	27	GB	a.b
West of Scotland, coastal area	1970	8	0.19	0.62	0.34	FE	A.	27	GB	a.b
Irish Sea :										
- Western part, offshore	1969-1970	26	0.18	3.75	1.03	FE	AA	27	GB	a.b
- Eastern part, offshore	1969-1970	43	0.28	1.9	0.99	FE	AA	27	GB	a.b
- Western part, shoreline	1970	9	0.9	2.7	1.4	FE	AA	27	GB	a.b
- Eastern part, shoreline	1970	11	1.1	3.1	1.7	FE	AA	27	GB	a.b
- Liverpool Bay	1969-71	27	0.9	3.03	1.45	I.ex	Pol	24	GB	c
- Colwyn Bay (Wales)	1969-71				2.0	FE	AA	27	GB	
- Conway Bay (Wales)	1969-71				3.0	I.ex	AA	26	GB	d
- Cardigan Bay (Wales)	1969-71	20	0.98	4.02	1.72	I.ex	Pol	24	GB	d
Bristol Channel	1969-71	44	1.02	4.74	2.07	I.ex	Pol	24	GB	c.d
English Channel, coastal area of UK	1969-70	8	0.23	1.6	0.88	FE	AA	27	GB	a.b
North Sea:										
- coastal area of UK	1969-71	84	0.24	1.9	0.83	FE	AA	42		a.b
- South east, 7 cruises	Jun.71-Sep.72	93	0.6	34	9.4	F	Pol	13.1to5	B	
- Belgian shoreline, 12 sampling places	1971-72	47	5	32	15	ACE	AA	15	B	

Remarks :
a- $\bar{X}$ = geometric mean
b- Percentage of total copper in filtered water : 17 to 29
c- Dominant source of pollution : domestic and industrial effluents
d- Dominant source of pollution : runoff from mineralized areas (former mining activity)

Element : Copper

Medium : River sediments

Unit : mg/kg

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Danube	Winter 71-72		50	500	232	AA	44 D	a
Elbe	Winter 71-72		80	220	161	AA	44 D	a
- Elbe, Hamburg harbour	Feb.73	12	31	1443		A.dig AA	53 D	b
Weser	Winter 71-72		25	210	115	AA	44 D	a
Ems	Winter 71-72		20	114	55	AA	44 D	a
- Diele	1958-60,69-70				155	Col.or AA	30.1 NL	c
- Leerort	1958-60,69-70				50	Col.or AA	30.1 NL	c
- Ditzum	1958-60,69-70				35	Col.or AA	30.1 NL	c
- Duitse Dollard	1958-60,69-70				30	Col.or AA	30.1 NL	c
Rhine	Winter 71-72		42	408	192	AA	44 D	a
- Biesboch	1958-60,69-70				570	Col.or AA	30.1 NL	c
- Haringvliet	1958-60,69-70				150	Col.or AA	30.1 NL	c
- Tributaries :								
- Neckar	Winter 71-72		25	335	203	AA	44 D	a
- Main	Winter 71-72		30	475	208	AA	44 D	a
- Dam of Esch/Sûre	1972	8	13	72	35	AA?	9 L	b.d
- Ruhr	1965-72	19	130	1500	750		47 D	b

Element : Copper
Medium : River sediments
Unit : mg/kg

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks
Maas and affluents from French to Dutch frontiers	Sep.71-Dec.72	46	18	190	76	UV	15	B	b
- in the Netherlands	1958-60,69-70				325	Col.or AA	30.1	NL	c
Scheldt and affluents from French frontier to above Ghent	Sep.71-Dec.72	6	11	>85	>50	UV	15	B	b
- in the Netherlands	1958-60,69-70				155	Col.or AA	30.1	NL	c
Yser and affluents from French frontier to the sea	Sep.71-Dec.72	14	3	31	15	UV	15	B	b
Other Belgian tributaries into the North Sea	Sep.71-Dec.72	6	12	180	63	UV	15	B	b
Conway (Wales)	1969	143	30	60	43		26	GB	e
- Conway(Wales) estuary	1969	5	13	85	34		26	GB	e
- Tributaries from mineralized area (West, former mining activity)	1969	14	30	200	63		26	GB	e
- Tributaries from unmineralized area (East)	1969	153	5	300	21		26	GB	e

Remarks : a- On clay fraction < 2 µm . Sedimentair clay as comparison : 45
b- On dry matter
c- On fraction <16 µm
d- 2 sampling places + sediment on the filters of the water purification plant.
e- On 80-mesh fraction .

Element : Copper

Medium : Sea sediments

Unit : mg/kg

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Baltic Sea								
- Flensburg fjord								
- Western part , 3 sampling places	May-Oct.70	20	31	220	95	AA	62 DK	On dry matter
- Eastern part, (sea side), 4 sampling places	May-Oct.70	15	2.3	35	25	AA	62 DK	On dry matter
North Sea								
- Waddenzee (receiving Rhine water)								
- Noord Friesland	1958-60,69-70				55	Col or AA	30.1 NL	On fraction <16 µm
- Noord Groningen	1958-60,69-70				40	Col or AA	30.1. NL	On fraction <16 µm
- Belgian shoreline, 11 sampling places	1971-72	43	0.6	58	16	UV	15 B	On dry matter
Irish Sea								
- Conway Bay, offshore	1969	3	5	16	9		26 GB	On 80-mesh fraction

Element : Copper

Medium : Fresh water organisms

Unit : mg/kg DRY matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\overline{X}$	Meth.	Ref.		Remarks.
WATERPLANTS										
Macrophytes	Dam of Esch/Sûre	Jun.-Sep.72	2	<3	3			9	L	
FISH										
Various species	Dam of Esch/Sûre	Jun.-Sep.72	2	4	4	4		9	L	
	Rhur	1965-72	16	9	30	17		47	D	

Element : Copper

Medium : Sea organisms - Seaweeds ,molluscs.

Unit : mg/kg WET matter (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
SEAWEEDS									
Fucus vesiculosus	Coastal areas :								
	- West of Scotland	1970	7	1.7	12.4	3.2	W.ox. AA	27 GB	b.c.On dry matter
	- Irish sea, west	1970	7	2.4	9.3	4.6	W.ox. AA	27 GB	b.c.On dry matter
	- Irish sea ,east	1970	13	3.7	16.9	9.0	W.ox. AA	27 GB	b.c.On dry matter
	- English Channel	1970	7	2.9	20.5	5.3	W.ox. AA	27 GB	b.c.On dry matter
	- North Sea	1970	6	2.6	28.4	10.1	W.ox. AA	27 GB	b.c.On dry matter
Porphyra umbilicalis (Laverweed)	Shoreline of Irish Sea :								
	- West	1970	9	2.8	23.3	8.9	W.ox. AA	27 GB	b.On dry matt
	- East	1970	13	6.6	19.5	11.5	W.ox. AA	27 GB	b.On dry matt
MOLLUSCS									
Ostrea edulis (oyster)	Galway Bay(Ireland)	May 72-Mar.73	12	3.0	21.0	6.80		1 Eir	
Patella vulgata (Limpet)	Severn estuary, south shore	1971-72	10	5.4	12.0	7.9	AA	21 GB	
	Shoreline of Irish Sea:								
	- West	1970	9	5.5	20.0	9.9	W.ox. AA	27 GB	b.On dry matte
	- East	1970	8	9.5	22.0	14.4	W.ox. AA	27 GB	b.On dry matte

Element : Copper

Medium : Sea organisms - Crustaceans, fish.

Unit : mg/kg WET matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
CRUSTACEANS									
Crangon crangon (Brown shrimp)	Belgian coast	1972	89	6.6	22.0	12.8	W.ox. GAA	32 B	
FISH									
Pleuronectidae									
Pleuronectes platessa (Plaice)	Irish Sea, Morecambe Bay	1972	34	0.25	1.2	0.58	W.ox. GAA	32 B	
	Bristol Channel and S.E Ireland	1972	18	0.26	1.7	0.72	W.ox. GAA	32 B	
	North Sea, Belgian coastal areas	1972	121	0.26	1.7	0.67	W.ox. GAA	32 B	
	North Sea, Dutch coastal areas	1971	15	0.27	1.39	0.61	Col	30.3 NL	d.
Solea vulgaris (Sole)	Bristol Channel and S.E. Ireland	1972	10	0.31	0.86	0.47	W.ox. GAA	32 B	
	North Sea, Belgian coastal areas	1972	8	0.53	1.4	0.74	W.ox. GAA	32 B	

Element : Copper

Medium : Sea organisms - Fish

Unit : mg/kg WET matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
FISH									
Gadidae									
Gadus morrhua (Cod)	North Sea, Belgian coastal areas	1972	35	0.30	1.2	0.67	W.ox. GAA	32 B	
Merlangus merlangus (Whiting)	North Sea, Belgian coastal areas	1972	120	0.27	3.4	1.03	W.ox. GAA	32 B	
Clupeidae									
Sprattus sprattus (Sprat)	North Sea, Belgian coastal areas	1972	47	0.74	2.4	1.31	W.ox. GAA	32 B	

Remarks : a- Unless otherwise specified.

b- $\bar{X}$ = geometric mean.

c- No significant difference with Fucus sampled in 1961 at the same places.

d- On dry matter : ~ 5 times more.

Element : Copper
Medium : Drinking water
Unit : µg/ℓ

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
	Surface waters								
Lindau	Bodensee (40m)	Jun.-Dec.72	7	2.5	18	9.6	A AA	45 D	a
Düsseldorf	Rhine	1971-72	23	4.0	136.4	24.0	AA	46 D	
	Dam of Esch/Sûre	1972	3		<2		AA?	9 L	b
	Groundwaters								
Berlin	Groundwater	1971-72	7			12.1	AA	46 D	
Berlin	Mainwater	1971-72	91	50.0	594.0	92.0	AA	46 D	
Mainz	19 groundwaters	1971-73	47	1	101	12	AA	51 D	
Mainz	Mainwater	1971-73	24	<1	56	16	AA	51 D	
Wiesbaden	5 Deep galleries	1971-73	38	<1	26	<1	AA	51 D	
Wiesbaden	5 Surface galleries	1971-73	7	<1	2	<2	AA	51 D	
Wiesbaden	6 Leak galleries	1971-73	11	<1	2	<1	AA	51 D	

Remarks :
a- Daily samples composited into a monthly sample .
b- Purified.

Element : Copper

Medium : Food

Unit : mg/kg or ppm

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
BEVERAGES									
Soft drinks	West Ireland	1969-71	37	0.10	3.2	0.51	AA	1 Eir	a
Beers	West Ireland	1969-71	25	0.16	3.0	0.45	AA	1 Eir	a
Tea	West Ireland	1969-71	36	1.0	40.0	17.2	AA	1 Eir	a
MILK AND MILK PRODUCTS									
Butter	The Netherlands, entire country	1969-71	1969	0.010	0.035	0.023	Col	37 NL	a
Milk									
- directly after calving	The Netherlands	1969-71		0.10	0.15		Col	39 NL	a
- early in the year	The Netherlands	1969-71				0.045	Col	39 NL	a
- late in the year	The Netherlands	1969-71				0.030	Col	39 NL	a
- yearly mean	The Netherlands	1969-71				0.040	Col	39 NL	a
Milkpowder, mean for 1971	The Netherlands	1971				0.400	Col	39 NL	a
Milkpowder									
- obtained by pulverisation									
- not de-greased	The Netherlands	1969-71	103	0.120	0.930	0.482	Col	38 NL	a
- de-greased	The Netherlands	1969-71	176	0.180	1.020	0.579	Col	38 NL	a
- obtained on an evaporation cylinder, not de-greased	The Netherlands	1969-71	20	0.300	1.140	0.655	Col	38 NL	a

Element : Copper
Medium : Food
Unit : mg/kg or ppm

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
MEAT										
Pork, M. longi. dorsi	Bavaria, F.R.G.	1970-71	60	0.30	1.98	1.00	NA	60	D	b
Beef, M. longi. dorsi	Bavaria, F.R.G.	1970-71	22	0.20	8.47	3.25	NA	60	D	b
Veal, M. longi. dorsi	Bavaria, F.R.G.	1970-71	20	0.28	4.32	1.55	NA	60	D	b
CEREALS										
Wheat	F.R.G.	1971	4	0.8	3.6	1.72		55	D	
	Imported from Canada and from URSS	1971	2	6.8	11.7			55	D	
Rye	F.R.G.	1971	6	1.5	4.0	2.15		55	D	
Maize	F.R.G. Experimental field			1.75	3.00			50	D	
VEGETABLES										
Cabbage	F.R.G.	1971	6	0.1	0.2	0.13		55	D	
Spinach	F.R.G.	1971	1			0.1		55	D	
Peas	Imported from France	1972	1			0.18		55	D	
Vegetables	F.R.G.			3.7	17.25			50	D	
Onions, green celery, chicory Witloof , scorzonera	Belgium, Experimental field	Jan. 1973	10	0.54	1.24	0.87	W.ox. AA	32	B	b
FRUIT										
Fresh										
Grapes	F.R.G.	1971	2	3.3	4.0	3.7	Col	55	D	
	Imported in F.R.G.	1971	20	1.3	6.6	4.20	Col.AA Pol	55	D	

Element : Copper

Medium : Food

Unit : mg/kg or ppm

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
FRUIT										
Preserves, canned fruit										
Apricot	Imported in F.R.G.	1971	5	0.43	0.82	0.60	AA	55	D	
Apricot - fruit	Imported in F.R.G.	1971	5	0.88	1.90	1.13	AA	55	D	
- juice	Imported in F.R.G.	1971	5	0.85	6.15	2.49	AA	55	D	
Bilberry	F.R.G.	1971	1			0.93	AA	55	D	
Mirabelle plum	F.R.G.	1971	1			1.3	AA	55	D	
Pear	Imported	1971	2	0.48	0.62	0.55	AA	55	D	
Pineapples - fruit	Imported in F.R.G.	1971	3	0.94	3.98	2.03	AA	55	D	
- juice	Imported in F.R.G.	1971	3	0.44	7.15	2.68	AA	55	D	
Strawberry	Imported from CSSR	1971	1			0.43	AA	55	D	
Mixed fruit	Imported	1971	1			1.07	AA	55	D	
Fruit juice	F.R.G.			0.36	1.84			50	D	

Element : Copper
Medium : Food
Unit : mg/kg or ppm

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
PREPARED FOODS									
Baby Foods	West Ireland	1969-71	5	0.2	4.0	2.1	AA	1 Eir	a
Soup Powders	West Ireland	1969-71	4	0.7	5.0	2.8	AA	1 Eir	a
SPICES									
Spices	West Ireland	1969-71	74	0.7	27.0	9.0	AA	1 Eir	a
Mustard	West Ireland	1969-71	30	0.5	20.0	3.9	AA	1 Eir	a
Herbs	West Ireland	1969-71	15	1.0	16.0	9.0	AA	1 Eir	a

Remarks :
a- On material as sold
b- On wet matter

Element : Copper

Medium : Air

Unit :

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Particulate matter								
United Kingdom ,7 sampling places	1971-72		0.001	0.040	0.026	NA	43 GB	µg/kg air
Federal Republic Germany :								
- München ,residential area	Jun.1972	2	0.03	0.05		W.dig.	45 D	µg/m³
- Frankfurt am Main								
- at street with heavy traffic	Jul.-Dec.72	34	0.06	0.49	0.26	AA	63 D	µg/m³
- residential and office area near the city	Jan.-Dec.72	106	0.02	0.70	0.34	AA	63 D	µg/m³
- München, 6 sampling places, monthly samples	1971	43	41	34380	1479	NA	56 D	µg/gparticulates
Rain (+ fallout)								
United Kingdom ,1 sampling place (pure area)	1971				23	NA	43 GB	µg/ℓ

Element : Copper
Medium : Soil
Unit : mg/kg

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
Soil, 0-0.3 m	F.R.G.,4 places			3.25	56.0			50	D	
Garbage compost (5 different)	F.R.G.			29	1175			50	D	
Loess formation, in a forest 5 layers to 1 m depth	Belgium, Meerdael	1964	5	7.3	13	10.2	UV	32	B	
Loess formation, in a semi-industrial region, 6 layers to 1.2 m depth	Belgium, Halle	1964	6	8.4	18.5	13.7	UV	32	B	
Sandy soil under pines, 3 layers to 0.2-0.28 m depth	Belgium, Bokrijk	1970	6	2.2	2.7	2.33	AA	32	B	
Sandy soil, cultivated	Belgium, Bredene	1968	2	10	14	12	UV	32	B	
Garden soil with humus	Belgium, Meisse	1968	5	14	22	18	UV	32	B	
Soil, 1.5 km from a metallurgical plant	Belgium	1965		350	1000		UV	32	B	
Soil developed from rubbles (of ruin)	F.R.G. Berlin	Nov.1971	9	64	111	61.5	Col	57	D	On dry material <2mm

Element : Copper

Medium : Soil

Unit : mg/kg

Cu.10.2

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
Soil from a hop culture, fungizides treated, layer , 0-0.25 m :	F.R.G. Hallertau (N.of München)	1971					AA	73 D	
- brown soil-Duration of treatment :									
0 years			3	n.d	19.4	11.2			
5 years			2	53.7	69.3	61.5			
29-32 years			3	273	370	314			
43 years			2	522	522	522			
- pseudogley 0 years			1			19.9			
20 years			1			340			

Element : Copper
Medium : Miscellaneous
Unit : mg/kg DRY matter

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks
PLANTS									
Bredene, Belgium - Sandy soil, cultivated									
- Meadow grass	1968	1			6	UV	32	B	
	1970	3	13.4	14.9	14.1	AA	32	B	
- Wheat	1968	1			3.0	UV	32	B	
- Barley	1968	1			4.9	UV	32	B	
Sint Truiden, Belgium -									
- Fruit-tree leaves (apple-, pear -, plum.-, cherry-trees)	1964	15			8.9	UV	32	B	
Bokrijk , Belgium - Sandy soil									
- Pine -needles	1970	5	4.1	6.3	4.9	AA	32	B	
Vicinity of a metallurgical plant, Belgium									
- Pine -needles, spinach , rhubarb	1972	5	52	630	187	AA	32	B	

F.1 - River water
F.10- Soil

FLUORINE

Element : Fluorine
Medium : River water
Unit : µg/ℓ

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Weser , Bremen	1971-72	100	100	250	150	Col	46 D	

Element : Fluorine

Medium : Soil

Unit : mg/kg

F.10

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
Sandy soil	F.R.G., Oberpfalz		4314	2	5040		A.dig. specific electrode	64 D	On dry matte

Fe.1 (1-3) - River water
Fe.2 - Sea water
Fe.3 - River sediments
Fe.6 - Sea organisms
Fe.7 - Drinking water
Fe.8 - Food
Fe.9 - Air
Fe.10 - Soil
Fe.11 - Miscellaneous

IRON

[redacted]

Element : Iron
Medium : River water
Unit : µg/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Havel-Spree, Berlin	1971-72	3	12	275	100	AA	46 D	
Weser								
km 366.2, Bremen	Oct.71-Mar.72	6	527	938	654	AA	52,46 D	a
- Bremen	1971-72	24	11	1710	514	AA	46 D	
- Bremen	1971-72	100	400	3300	855		46 D	
Rhine								
- Bodensee , Depth 0m	1971-73	22	9	1256	165	AA	51 D	
Depth 40m	1971-73	21	3	1932	475	AA	51 D	
Depth 60m	1971-73	22	6	2220	152	AA	51 D	
Depth 80m	1971-73	18	2	1964	228	AA	51 D	
- Mannheim, km 434	1971-73	23	12	1150	198	AA	51 D	
- Mainz, km 498.5	1971-73	16	12	355	185	AA	51 D	
- Wiesbaden, km 506	1971-73	28	13	141	74	AA	51 D	
- Bimmen	1971-72	24	940	2650	1627	AA	46 D	
- Düsseldorf	1971-72	24	344	2150	987	AA	46 D	
- km 698			300	3200	1000	AA	54 D	b
- km 865			500	10000	2500	AA	54 D	b
- km 643-865		4	300	3800	1500	AA	54 D	b

Element : Iron
Medium : River water
Unit : µg/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Rhine								
- Tributaries								
- Zürichsee	1971-73	3			8	AA	51 D	
- Main, Ottendorf, km 345	1971-73	16	3.1	104	42	AA	51 D	
Garstadt, km 325	1971-73	15	23	75	41	AA	51 D	
Kostheim, km 0.5	1971-73	14	16	613	176	AA	51 D	
- Sieg (mouth)		4	330	3100	1800	AA	54 D	
- Wupper (mouth)		4	600	2500	1600	AA	54 D	
- Erft (mouth)		4	1010	2400	1550	AA	54 D	
- Ruhr (mouth)		4	350	740	500	AA	54 D	
- Rheinberger-Altrhein		3	800	20000	8200	AA	54 D	
- Lippe (mouth)		4	320	2800	1120	AA	54 D	
Maas, and affluents excepting Sambre								
- from French frontier to above Liège	Sep.71-Dec.72	33	32	295	161	AC GAA	15 B	
- from Liège to Dutch frontier	Sep.71-Dec.72	23	158	902	529	AC GAA	15 B	
- affluent Sambre (industrialarea)	Sep.71-Dec.72	30	90	1790	1000	AF AA	14 B	

Element : Iron

Medium : River water

Unit : µg/ℓ

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.		Ref.		Remarks
Scheldt, and affluents from French to Dutch frontiers	Sep.71-Dec.72	12	40	295	163	ACE	AA	15	B	
Yser , and affluents from French frontier to the sea	Sep.71-Dec.72	13	24	300	127	ACE	AA	15	B	
Belgian tributaries into the North sea	Sep.71-Dec.72	11	30	200	105	ACE	AA	15	B	
Miscellaneous										
- Running water Region Wiesbaden,33 sampling places	1971-73	171	<1	106	<14		AA	51	D	

Remarks :

a- 3 times a week- samples composited into a monthly sample.

b- Composited weekly samples .

Element : Iron
Medium : Sea water
Unit : µg/ℓ

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.		Ref.		Remarks
Irish Sea :										
- Western part, offshore	1969-70	26	0.03	0.6	0.10	FE	AA	27	GB	a.b
- Eastern part, offshore	1969-70	43	0.06	1.9	0.34	FE	AA	27	GB	a.b
- Western part, shoreline	1970	9	2.5	23.9	6.1	FE	AA	27	GB	a.b
- Eastern part, shoreline	1970	11	5.3	24.7	11.9	FE	AA	27	GB	a.b
English Channel, coastal area of UK	1969-70	8	0.06	2.3	0.5	FE	AA	27	GB	a.b
North Sea :										
- coastal area of UK	1969-70	5	0.06	2.0	0.45	FE	AA	27	GB	a.b
- South East	Jun.-Aug.71	24	33	618	208		GAA	13.7	B	
- Belgian shoreline, 12 sampling places	1971-72	48	10	360	180	ACE	AA	15	B	

Remarks :
a- $\bar{X}$: geometric mean
b- Percentage of total iron in filtered water : 1 to 7.

Element : Iron

Medium : River sediments

Unit : mg/kg

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Elbe , Hamburg Harbour	Feb.73	12	4000	61000		A.dig AA	53 D	On dry matter

Element : Iron
Medium : Sea organisms
Unit : mg/kg DRY matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
SEAWEEDS									
Fucus vesiculosus	Coastal areas :								
	- West of Scotland	1970	7	56	417	127	W.ox. AA	27 GB	a.b
	- Irish Sea, west	1970	7	84	293	189	W.ox. AA	27 GB	a.b
	- Irish Sea, east	1970	13	85	515	249	W.ox. AA	27 GB	a.b
	- English Channel	1970	7	69	312	143	W.ox. AA	27 GB	a.b
	- North Sea	1970	6	100	1517	216	W.ox. AA	27 GB	a.b
Porphyra umbilicalis	- Shoreline of Irish Sea:								
(Laverweed)	- West	1970	9	104	3800	309	W.ox. AA	27 GB	a.
	- East	1970	13	137	1820	387	W.ox. AA	27 GB	a.
MOLLUSCS									
Patella vulgata	Shoreline of Irish Sea :								
(Limpet)	- West	1970	9	1580	7800	2450	W.ox. AA	27 GB	a.
	- East	1970	8	1380	3270	2060	W.ox. AA	27 GB	a.

Remarks :
a - $\bar{X}$ = geometric mean
b- No significant differences with Fucus sample in 1961 at the same places .

Element : Iron

Medium : Drinking water

Unit : µg/ℓ

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
	Surface waters								
Düsseldorf	Rhein	1971-72	23	8.1	637	116	AA	46 D	
	Groundwaters								
Berlin	Groundwater	1971-72	7			60	AA	46 D	
Berlin	Mainwater	1971-72	91	30.0	320	99	AA	46 D	
Bremen-Blumenthal	Groundwater	1955-73	~200	5000	8000	6500	Col	46 D	
Bremen-Vegesach	Groundwater	1955-73	~200	1000	5000	2500	Col	46 D	
Mainz	19 groundwaters	1971-73	47	3	1563	76	AA	51 D	
Mainz	Mainwater	1971-73	22	1	185	44	AA	51 D	
Wiesbaden	5 Deep galleries	1971-73	23	<1	41	<7	AA	51 D	
Wiesbaden	5 Surface galleries	1971-73	7	7	15	9	AA	51 D	
Wiesbaden	6 Leak galleries	1971-73	11	5	19	10	AA	51 D	

Element : Iron
Medium : Food
Unit : mg/kg

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
MILK PRODUCTS										
Butter	The Netherlands	1970 ?	12		<1		NA	34	NL	a
MEAT										
Pork,M.Longi.Dorsi	Bavaria,F.R.G.	1970-71	60	3.5	22.0	9.7	NA	60	D	b
Beef,M.Longi.Dorsi	Bavaria ,F.R.G.	1970-71	22	22.1	69.4	41.5	NA	60	D	b
Veal,M.Longi.Dorsi	Bavaria, F.R.G.	1970-71	21	7.33	22.4	14.7	NA	60	D	b

Remarks :
a- On commercial matter
b- On wet matter .

[redacted]

Element : Iron

Medium : Air

Unit :

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks
Particulate matter									
United Kingdom, 7 sampling places	1971-72		0.102	0.785	0.372	NA	43	GB	µg/kg air
Federal Republic Germany :									
- Frankfurt am Main :									
- at street with heavy traffic	Jul.-Dec.72	34	1.10	11.36	4.69	AA	63	D	µg/m³
- Residential and office area near the city	Jan.-Dec.72	200	0.64	9.98	2.44	AA	63	D	µg/m³
Rain (+ fallout)									
United Kingdom, 1 sampling place (pure area)	1971				200	NA	43	GB	µg/ℓ

Element : Iron
Medium : Soil
Unit : mg/kg

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
Loess formation, in a forest, 5 layers to 1 m depth	Belgium, Meerdael	1964	5	15400	23100	18600	UV	32 B	
Loess formation, in a semi-industrial region, 6 layers to 1.2 m depth	Belgium, Halle	1964	6	9800	31200	16800	UV	32 B	
Sandy soil under pines, 3 layers to 0.2 -0.28 m depth	Belgium, Bokrijk	1970	6	490	1600	980	AA	32 B	

Element : Iron

Medium : Miscellaneous

Unit : mg/kg DRY matter

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
PLANTS								
Bredene, Belgium-Sandy soil, cultivated								
- Meadow grass	1968	1			350	X	32 B	
	1970	3	477	2582	1208	AA	32 B	
- Wheat	1968	1			198	X	32 B	
- Barley	1968	1			894	X	32 B	
Sint Truiden, Belgium								
- Fruit-tree leaves (Apple-pear-plum -cherry-trees)	1964	15			422	X	32 B	
Bokrijk, Belgium -Sandy soil.								
- Pine-needles	1970	5	289	509	373	AA	32 B	
Vicinity of a metallurgical plant, Belgium								
- Pine-needles, spinach, rhubarb	1972	4	190	360	259	AA	32 B	

Pb.1 (1-4) - River water
Pb.2 (1-2) - Sea water
Pb.3 (1-2) - River sediments
Pb.4 - Sea sediments
Pb.5 - Fresh water organisms
Pb.6 (1-7) - Sea organisms
Pb.7 - Drinking water
Pb.8 (1-17) - Food
Pb.9 - Air
Pb.10 - Soil
Pb.11 - Miscellaneous

LEAD

[redacted]

Element : Lead

Medium : River water

Unit : µg/l

Pb.1.1

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Danube								
- 2 places (Leipheim, Bad Abbach)	Aug.71-Nov.72	36	4.0	38	18	AA	45 D	a
Havel-Spree, Berlin	1971-72	3	6.8	11.7	9.8	E AA	46 D	
Weser,								
- Km 366.2, Bremen	Oct.71-Mar.72	6	14	19	15	AA	46,52 D	c
- Bremen	1971-72	24	12.2	51.3	17.8	E AA	46 D	
Rhine								
- Bodensee - Lindau	Aug.71-Nov.72	18	10	33	19	AA	45 D	b
- Depth 0 m	1971-73	22	7	32	16	AA	51 D	
- Depth 40m	1971-73	21	9	92	16	AA	51 D	
- Depth 60m	1971-73	22	2	31	32	AA	51 D	
- Depth 80m	1971-73	18	7	66	19	AA	51 D	
- Mannheim, km 434	1971-73	23	2	44	49	AA	51 D	
- Mainz, km 498.5	1971-73	16	4	53	34	AA	51 D	
- Wiesbaden, km 506	1971-73	33	10	96	31	AA	51 D	
- Braubach, km 581	1971-72	13	4	17	11	AA	48 D	dissolved
- Bimmen	1971-72	24	42	128	64.8	E AA	46 D	
- Düsseldorf	1971-72	24	12.3	135.5	34.1	E AA	46 D	

Element : Lead
Medium : River water
Unit : µg/ℓ

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.		Ref.		Remarks
Rhine										
- km 698			25	120	50		AA	54	D	d
- km 865			40	120	80		AA	54	D	d
- km 643- 865		4	5	60	35		AA	54	D	
- Emmerich, km 865	1969-72	82	5	56	15		AA	48	D	dissolved
- Waal near Nijmegen	1972	38	28	125	50	AE	AA	41	NL	~82% in susp.watter
- Ketelmeer (near mouth of Ijssel)	1971-72	17	2	35	19.4	AE	AA	41	NL	
- Tributaries :										
- Zürichsee	1971-73	3			9		AA	51	D	
- Main, Ottendorf, km 345	1971-73	16	2	46	37		AA	51	D	
Garstadt, km 325	1971-73	15	12	41	27		AA	51	D	
Kostheim, km 0.5	1971-73	15	9	40	27		AA	51	D	
- Mosel, Koblenz, km 2	1971-72	13	1.6	26	16		AA	48	D	dissolved
- Sûre, Dam of Esch/Sûre 4 sampling places	1972	11	1	19	6.8		AA?	9	L	
- Sieg (mouth)		2	10	25	18		AA	54	D	
- Wupper (mouth)		3	10	25	20		AA	54	D	
- Erft (mouth)		3	10	25	20		AA	54	D	

Element : Lead

Medium : River water

Unit : µg/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Rhine								
- Tributaries :								
- Ruhr, part a	1971-73	53	< 5	19	6	F	47 D	week averages
part b	1971-73	53	< 5	23	6	F	47 D	week averages
part c	1971-73	6	7	16	10	F	47 D	month averages
part d	1971-73	6	11	19	14	F	47 D	month averages
(mouth)		3	2	70	34	AA	54 D	
- Rheinberger-Altrhein		3		100	62	AA	54 D	
- Lippe (mouth)		3	10	38	23	AA	54 D	
Maas ,and affluents								
- from French frontier to above Liège	Sep.71-Dec.72	29	1	9	4.4	AC GAA	15 B	
- from Liège to Dutch frontier	Sep.71-Dec.72	20	5	100	30	AC GAA	15 B	
- Eijsden	1971-72	16	17	84	42	AE AA	41 NL	
- Keizersveer	1972	7	12	41	18.9	AE AA	41 NL	
- Grave	1971-72	11	3	12	<7		5 NL	
Scheldt								
- Scheldt and affluents from French to Dutch frontiers	Sep.71-Dec.72	12	5	34	15	ACE AA	15 B	
- Tidal zone :								
- from Ruppelmonde to Dutch frontier, 6 sampling places	1971-72	82	2.5	28.8	8.5	F Pol	13.4,6 B	

Element : Lead
Medium : River water
Unit : µg/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.		Ref.		Remarks
Scheldt										
- Tidal zone:										
- Dutch frontier	Nov.71	30	2.7	13.9	5.3	F	Pol	13.5	B	
- from Dutch frontier to the sea, 3 sampling places	Mar.72	70	0.9	22.8	6.6	F	Pol	13.6	B	
Other Belgian tributaries into the North Sea	Sep.71-Dec.72	11	5	12	8	ACE	AA	15	B	
Conway (Wales)										
- above tidal influence	1969	8	2.2	31.8	8.7	I.ex	AA	26	GB	
- below tidal influence	1969	16	0.9	29.8	6.0	I.ex	AA	26	GB	
- Tributaries from mineralized area (West, former mining activity)	1969	12	2.7	16.3	7.4	I.ex	AA	26	GB	
- Tributaries from unmineralized area (East)	1969	22	0.5	16.5	4.5	I.ex	AA	26	GB	
Rivers in Wales-Mineralized area	Sep.70-Oct.71	7?	1.3	17.6		I.ex	AA	25	GB	
Welsh"clean"water	Sep.70-Oct.71				0.7	I.ex	AA	25	GB	
Miscellaneous										
- Running water Region Wiesbaden,33 sampling places	1971-73	178	<1	31	7		AA	51	D	

a- Continuous sampling for a monthly sample
b- Daily samples composited into a monthly sample
c- 3 times a week-samples composited into a monthly sample
d- Composited weekly samples .

Element : Lead

Medium : Sea water

Unit : µg/ℓ

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
West of Scotland, coastal area	1970	8			<0.05	FE AA	27 GB	a.b
Irish Sea :								
- Western part, offshore	1970	10	<0.05	1.2	0.19	FE AA	27 GB	a.b
- Eastern part, offshore	1970	21	<0.05	1.0	0.11	FE AA	27 GB	a.b
- Western part, shoreline	1970	7	0.9	2.9	1.6	FE AA	27 GB	a.b
- Eastern part, shoreline	1970	8	0.6	2.4	1.3	FE AA	27 GB	a.b
- Liverpool Bay	1969-71		0.66	4.17	1.74	I.ex Pol	24 GB	c
- Colwyn Bay (Wales)	1969-71				1.3	FE AA	27 GB	
- Conway Bay (Wales)	1969-71				3.6	I.ex AA	26 GB	d
- Cardigan Bay (Wales)	1969-71		1.12	3.53	2.24	I.ex Pol	24 GB	d
Bristol Channel	1969-71		0.35	5.06	1.18	I.ex Pol	24 GB	c.d
- Bristol Channel	1970-71	4	0.4	0.8	0.6	Pol	19 GB	
- Severn Estuary	1970-71	4	1.1	2.5	1.7	Pol	19 GB	
English Channel, coastal area of UK	1970	4	<0.05	1.1	0.17	FE AA	27 GB	a.b

Element : Lead
Medium : Sea water
Unit : µg/ℓ

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
North Sea :								
- coastal area of UK	1970	4	<0.05	0.8	0.21	FE AA	27 GB	a.b
- South East, 7 cruises	Jun.71-Sep.72	94	0.6	70.4	4.9	F Pol	13.1to5 B	
- Belgian shoreline 12 sampling places	1971-72	48	<5	58	<23	ACE AA	15 B	

Remarks :
a- $\bar{X}$ = geometric mean
b- Percentage of total lead in filtered water : 18 to 50
c- Dominant source of pollution : domestic and industrial effluents
d- Dominant source of pollution : runoff from mineralized areas (former mining activity)

Element : Lead

Medium : River sediments

Unit : mg/kg

Pb.3.1

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks
Danube	Winter 71-72		81	312	156	AA	44	D	a
Elbe	Winter 71-72		150	712	430	AA	44	D	a
Weser	Winter 71-72		150	405	241	AA	44	D	a
Ems	Winter 71-72		70	175	112	AA	44	D	a
Rhine	Winter 71-72		83	566	251	AA	44	D	a
- Tributaries :									
- Neckar	Winter 71-72		60	305	221	AA	44	D	a
- Main	Winter 71-72		50	650	218	AA	44	D	a
- Dam of Esch/Sûre	1972	8	23	39	32	AA?	9	L	b.c
- Ruhr	1965-72	19	5	2720	840		47	D	b
Maas and affluents from French to Dutch frontiers	Sep.71-Dec.72	46	44	560	208	UV	15	B	b
Scheldt and affluents from French frontier to above Ghent	Sep.71-Dec.72	6	24	571	180	UV	15	B	b
Yser and affluents from French frontier to the sea	Sep.71-Dec.72	14	24	290	87	UV	15	B	b
Other Belgian tributaries into the North Sea	Sep.71-Dec.72	6	52	170	99	UV	15	B	b

Element : Lead

Medium : River sediments

Unit : mg/kg

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Conway (Wales)	1969	143	60	400	165		26 GB	d
- Conway(Wales), estuary	1969	5	85	600	205		26 GB	d
- Tributaries from mineralized area (West, former mining activity)	1969	14	85	>10000	2370		26 GB	d
- Tributaries from unmineralized area (East)	1969	153	20	400	160		26 GB	d

Remarks :

a- On clay fraction < 2 µm . Sedimentair clay as comparison :20

b- On dry matter

c- 2 sampling places + sediment on the filters of the water purification plant

d- On 80-mesh fraction .

Element : Lead

Medium : Sea sediments

Unit : mg/kg

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Baltic Sea								
- Flensburg fjord								
- Western part, 3 sampling places	May -Oct.70	20	40	300	121	AA	62 DK	On dry matter
- Eastern part (sea side), 4 sampling places	May -Oct.70	15	2	56	39	AA	62 DK	On dry matter
North Sea								
- Belgian shoreline, 11 sampling places	1971-72	43	10	280	85	UV	15 B	On dry matter
Irish Sea								
- Conway Bay, offshore	1969	3	30	85	55		26 GB	On 80-mesh fraction
- Severn estuary , south shore	1970-71	7	130	200	163	AA	19 GB	On dry matter

Element : Lead
Medium : Fresh water organisms
Unit : mg/kg

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
WATERPLANTS										
Macrophytes	Dam of Esch/Sûre	Jun.-Sep.72	2	10	11	10.5		9	L	On DRY matter
FISH										
Various species	Dam of Esch/Sûre	Jun.-Sep.72	2	5	6	5.5		9	L	On DRY matter
	Ruhr	1965-72	16	<5	33	19		47	D	On DRY matter
	England and Wales	1970-72	32			<0.50	W.ox.E AA	29	GB	a.On WET matte
	Scotland	1970-72	22	0.13	0.32	0.21	W.ox.E AA	29	GB	a.On WET matte

Remarks :
a- On edible portion of the sample as received.

Element : Lead

Medium : Sea organisms - Seaweeds

Unit : mg/kg DRY matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
SEAWEEDS									
Fucus vesiculosus	Coastal areas :								
	- West of Scotland	1970	7	0.5	4.3	2.1	W.ox. AA	27 GB	b.c
	- Irish Sea, west	1970	7	1.4	7.7	3.2	W.ox. AA	27 GB	b.c
	- Irish Sea, east	1970	13	0.6	9.0	3.4	W.ox. AA	27 GB	b.c
	- Severn estuary and Bristol Channel - NE	1970-72	8	<0.1	19	<7	AA	20 GB	d.
	- NW	1970-72	7	<0.1	12	<4	AA	20 GB	d.
	- SE	1970-72	4	0.2	8.5	3.8	AA	19 GB	d.
	- SW	1970-72	4		<0.1		AA	19 GB	d.
	- English Channel	1970	7	2.2	4.2	3.2	W.ox. AA	27 GB	b.c
	- North Sea	1970	5	2.3	5.7	4.0	W.ox. AA	27 GB	b.c
Porphyra umbilicalis	Shoreline of Irish Sea :								
(Laverweed)	- West	1970	9	0.8	10.5	3.1	W.ox. AA	27 GB	b.
	- East	1970	13	1.1	10.5	2.7	W.ox. AA	27 GB	b.

Element : Lead

Medium : Sea organisms -Molluscs

Unit : mg/kg DRY matter (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
MOLLUSCS									
Ostrea edulis (Oyster)	Galway Bay, Ireland	May 72-Mar.73	12	0.12	0.50	0.21		1 Eir	On wet matter
Mytilus edulis (Mussel)	Severn estuary and Bristol Channel - NE	1970-72	5	<0.1	30	<11	AA	20 GB	d.
	- NW	1970-72	7	<0.1	9	<3	AA	20 GB	d.
	- NE	1970-72	4	2.0	9.5	5.2	AA	29 GB	d.e.h On wet matter
	- SE	1970-72	1			3.5	AA	29 GB	d.e.h On wet matter
	Cardigan Bay	1970-72	5	2.0	8.0	3.7	AA	29 GB	d.e.h On wet matter
Patella vulgata (Limpet)	Shoreline of Irish Sea :								
	- West	1970	9	3.5	85	7.8	W.ox. AA	27 GB	b.c
	- East	1970	8	5.4	12.5	7.9	W.ox. AA	27 GB	b.c
	Severn estuary and Bristol Channel - NE	1970-72	8	3	27	13	AA	20 GB	d.
	- NW	1970-72	9	<0.1	15	<4	AA	20 GB	d.
	- SE	1970-72	4	4.0	9.5	7.8	AA	19 GB	d.
	- SW	1970-72	4	3.0	4.0	3.2	AA	19 GB	d.
	- SE	1970-72	7	0.25	0.75	0.52	AA	21 GB	d.On wet matte
	- NE	1970-72	7	2.0	9.5	5.8	AA	29 GB	d.e.h.On wet matter
	- SE	1970-72	10	0.5	6.0	3.7	AA	29 GB	d.e.h.On wet matter
	Cardigan Bay	1970-72	7	0.5	5.0	2.2	AA	29 GB	e.h.On wet matter

Element : Lead

Pb.6.3

Medium : Sea organisms -Molluscs.

Unit : mg/kg DRY matter (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
MOLLUSCS.									
Littorina littorea (Winckle)	Severn estuary and Bristol Channel - NE	1970-72	9	2	19	8	AA	20 GB	d.
	- NW	1970-72	6	<0.1	14	<4	AA	20 GB	d.
	- SE	1970-72	3	0.2	3.0	1.3	AA	19 GB	d.
	- SW	1970-72	4	0.1	0.2	0.15	AA	19 GB	d.
	- NE	1970-72	7	2.0	18	10	AA	29 GB	d.e.h.On wet matter
	- SE	1970-72	5	8.0	18	13	AA	29 GB	d.e.h.On wet matter
	Cardigan Bay	1970-72	5	6.0	17	8.9	AA	29 GB	e.h.On wet matter
Nucella lapillus (Dog whelk)	Severn estuary and Bristol Channel - NE	1970-72	5	1	38	13	AA	20 GB	d.
	- NW	1970-72	9	<0.1	10	<4	AA	20 GB	d.

Element : Lead
Medium : Sea organisms - Crustaceans, shellfish
Unit : mg/kg WET matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
CRUSTACEANS										
Crangon crangon (Brown shrimp)	Belgian coast	1972	22	0.40	16.8	4.32	Calc. GAA	32	B	
	Severn estuary and Bristol Channel -NE	1970-72	3	3.0	5.0	3.8	AA	29	GB	g.h
	-SE	1970-72	3	2.0	4.5	3.7	AA	29	GB	g.h
SHELLFISH , various species	Coastal waters :									
	- England and Wales, excluding Thames estuary, Bristol Channel and Cardigan Bay	1970-72	183	<0.5	5.5	<1.07	AA	29	GB	e.h
	- Thames estuary	1970-72	32	<0.5	5.0	<2.3	AA	29	GB	e.h
	- Bristol Channel and Severn estuary, NE+SE, + Caraigan Bay	1970-72	57	0.5	18	5.9	AA	29	GB	d.e.f.h
	- Bristol Channel , NW+SW	1970-72	9	0.5	5.0	1.7	AA	29	GB	d.e.h
	- Scotland , excluding the places of the following item	1970-72	42	<0.1	1.2	<0.39	AA	29	GB	e.h
	- Firth of Clyde, Moray Firth/Aberdeen, Firth of Forth	1970-72	40	<0.1	5.5	<0.91	AA	29	GB	e.h

Element : Lead

Medium : Sea organisms -Fish

Unit : mg/kg WET matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
FISH									
Pleuronectidae									
Pleuronectes platessa (Plaice)	Irish Sea, Morecambe Bay	1972	16	0.13	2.8	0.52	Calc. GAA	32 B	
	Bristol Channel and S.E Ireland	1972	8	0.11	0.22	0.175	Calc. GAA	32 B	
	Bristol Channel and Severn estuary, NE + SE	1970-72	29	<0.5	1.0	<0.5	AA	29 GB	d.e
Limanda limanda (Dab)	Bristol Channel and Severn estuary, NE + SE	1970-72	1			<0.5	AA	29 GB	e.d
Platichthys flesus (Flounder)	Bristol Channel and Severn estuary, NE + SE	1970-72	11	<0.5	3.0	<0.5	AA	29 GB	e.d
Scophthalmus rhombus (Brill)	Bristol Channel and Severn estuary, NE + SE	1970-72	1			<0.5	AA	29 GB	e.d
Scorpaenidae									
Trigla cuculus (Red gurnard)	Bristol Channel and Severn estuary, NE + SE	1970-72	10			<0.5	AA	29 GB	e
Gadidae									
Gadus morrhua (Cod)	North Sea, Belgian coastal areas	1972	14	0.21	0.8	0.30	Calc. GAA	32 B	
	Bristol Channel and Severn estuary, NE + SE	1970-72	2			<0.5	AA	29 GB	e.d

Element : Lead

Medium : Sea organisms -Fish

Unit : mg/kg WET matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
FISH									
Gadidae									
Trisopterus luscus (Pout)	Bristol Channel and Severn estuary , NE + SE	1970-72	9	<0.5	1.0	<1.0	AA	29 GB	e.d
Pollachius pollachius (Pollack)	Bristol Channel and Severn estuary , NE + SE	1970-72	2	<0.5	1.0	<0.8	AA	29 GB	e.d
Merlangus merlangus (Whiting)	Bristol Channel and Severn estuary, NE + SE	1970-72	53	<0.5	1.0	<0.5	AA	29 GB	e.d
	North Sea, Belgian coastal areas	1970-72	16	0.1	4.0	0.8	Calc. GAA	32 B	
Clupeidae									
Sprattus sprattus (Sprat)	North Sea, Belgian coastal areas	1972	23	0.1	5.3	2.0	Calc. GAA	32 B	
FISH, various species	Distant waters of UK (Ireland, Norway, Barents Sea)	1970-72	31	<0.5	1.0	<0.6	AA	29 GB	e
	Middle distance waters :								
	- Mid North Sea	1970-72	39	<0.5	2.0	<0.69	AA	29 GB	e
	- Southern North Sea	1970-72	21			<0.5	AA	29 GB	e

Element : Lead

Medium : Sea organisms - Fish

Unit : mg/kg WET matter

Pb.6.7

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
FISH ,various species	Coastal waters of UK excluding the following item	1970-72	1173	<0.5	5.5	<0.5	AA	29 GB	e
	Bristol Channel and Severn estuary , NE + SE	1970-72	118	<0.5	3.0	<0.55	AA	29 GB	d.e.f

Remarks :

a- Unless otherwise specified

b- $\bar{X}$ = geometric mean

c- No significant difference with Fucus vesiculosus sampled in 1961 at the same places.

d- Places of sampling : N = north shore of Severn estuary and Bristol Channel
S = south shore of Severn estuary and Bristol Channel
E = eastern part, from upper estuary to Worms Head or Mumbles Head (north shore) and to Watchet or Lynton (south shore)
W = western part, from these places to the open sea .

e- On edible portion of the sample as received.

f- Detailed under the specific names of the fish.

g- Whole, unpealed shrimps.Pb in tail (edible portion) : < 12% of total Pb

h- Bulked samples of varying number of individuals.

Element : Lead
Medium : Drinking water
Unit : µg/ℓ

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
	Surface waters								
Lindau	Bodensee (40m)	Jun.-Dec.72	7	8.5	22	12.3	A AA	45 D	a
Düsseldorf	Rhine	1971-72	23	5.4	110.2	15.5	AA	46 D	
Rotterdam-Honingerdijk	Rhine	Mar.72	1			1		4 NL	
Andijk	Ijsselmeer	Mar.72	1			<1		4 NL	
	Dam of Esch/Sûre	1972	3	1	8	4.7	AA?	9 L	b
	Groundwaters								
Mainz	19 groundwaters	1971-73	47	9	59	26	AA	51 D	
Mainz	Main water	1971-73	24	7	59	23	AA	51 D	
Wiesbaden	5 Deep galleries	1971-73	39	<1	58	9	AA	51 D	
Wiesbaden	5 Surface galleries	1971-73	6	4	17	8	AA	51 D	
Wiesbaden	6 Leak galleries	1971-73	11	3	15	9	AA	51 D	
Haarlem	Dunes	Mar.72	1			1		4 NL	
Castricum(The Netherlands)	Dunes recharged with Rhine water	Mar.72	1			2		4 NL	
Amsterdam-Leiduin	Dunes recharged with Rhine water	Mar.72	1			<1		4 NL	
Den Haag	Dunes recharged with Rhine water	Mar.72	1			<1		4 NL	
Frankfurt	Not specified (Main water)	1971-72	107	1.4	18.8	5.6	AA	46 D	

Remarks :

a- Daily samples composited into a monthly sample.
b- Purified.

Element : Lead

Medium : Food- Beverages

Unit : mg/kg material as presented (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
BEVERAGES									
Soft drinks	Ireland, W.	1969-71	38	0.01	0.30	0.08		1 Eir	
Soft drinks (concentrate)	Ireland, W.	1969-71	20	0.15	0.70	0.36		1 Eir	
7- up	Ireland	Jan.1971	1			0.01		1 Eir	
Fanta-orange	Ireland	Jan.1971	1			0.01		1 Eir	
Coke	Ireland	Jan.1971	1			0.01		1 Eir	
Beers	Ireland,W.	1969-71	40	0.01	0.50	0.14		1 Eir	
Stout	Ireland	1971	1			0.01		1 Eir	
Beverage powders (4 types)	United Kingdom	1970-72	4	0.05	0.11	0.07	W.ox. AA	29 GB	

Element : Lead
Medium : Food - Fish and fish products
Unit : mg/kg material as presented (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
FISH AND FISH PRODUCTS									
Fresh									
Fresh water fish	F.R.G.	1971-72	16	0.00	0.49	0.26	AA	5. D	b.c
Sea fish	F.R.G.	1971-72	23	0.08	0.75	0.35	AA	55 D	b.c
Canned or bottled									
Crab paste	Ireland	Mar.1972	2	0.05	0.1	0.07		1 Eir	
Cheese spread and crab	Ireland	Mar.1972	1			0.05		1 Eir	
Dressed crab	Ireland	Mar.1972	1			0.1		1 Eir	
Salmon and shrimp paste	Ireland	Mar.1972	1			0.05		1 Eir	
Prawns	Ireland	Mar.1972	1			0.05		1 Eir	
Prawns curry	Ireland	Mar.1972	1			0.02		1 Eir	
Salmon	Ireland	Mar.1972	1			0.05		1 Eir	
Salmon spread	Ireland	Jan.1971	1			<0.05		1 Eir	
Sardines	United Kingdom	1970-72	11	0.01	2.0	0.5	W.ox. AA	29 GB	
Sardines (canadian)	Ireland	Jan.1971	1			0.05		1 Eir	
Fish and macaroni	Ireland	Mar.1972	1			0.05		1 Eir	
Composite fish component of the UK diet	United Kingdom,14 towns	1970-72	22	<0.01	0.40	0.08	W.ox. AA	29 GB	

Element : Lead

Medium : Food- Milk and milk products

Unit : mg/kg material as presented (a)

Pb.8.3

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
MILK AND MILK PRODUCTS									
Milk	Ireland, W.	1969-71	8	0.01	0.04	0.03		1 Eir	
Milk	Ireland, mining areas	1969-71	90	0.02	0.28	0.10		1 Eir	
Farmmilk (raw)	F.R.G.	1971-72	82	0.01	0.23	0.06	AA	55 D	b.c
Milk	F.R.G.	1971-72	131	0.01	0.19	0.04	AA	55 D	b.c
Creamed milk	F.R.G.	1971-72	15	0.08	0.37	0.23	AA	55 D	b.c
Evaporated and condensed milk (3 types) - canned	United Kingdom	1970-72	5	0.02	0.08	0.05	W.ox. AA	29 GB	
Cream (in jar)	United Kingdom	1970-72	1			0.12	W.ox. AA	29 GB	
Cream (canned)	United Kingdom	1970-72	1			0.10	W.ox. AA	29 GB	
Butter (6 varieties)	United Kingdom	1970-72	10	<0.01	1.6	0.34	W.ox. AA	29 GB	
Cheese (14 varieties)	United Kingdom	1970-72	14	<0.01	1.2	0.13	W.ox. AA	29 GB	
Milk products	F.R.G.			0.08	3.70			50 D	b.c
Composite milk component of the UK diet	United Kingdom, 14 towns	1970-72	33	<0.01	0.08	0.03	W.ox. AA	29 GB	

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
MEAT AND MEAT PRODUCTS									
Beef									
Beef, different cuts	United Kingdom	1970-72	7	<0.01	0.50	0.23	W.ox. AA	29 GB	
Beef,M.longi.dorsi	Bavaria,F.R.G.	1970-71	10	0.40	0.75	0.57	AA	60 D	
Veal,M.longi.dorsi	Bavaria,F.R.G.	1970-71	10	0.91	1.00	0.96	AA	60 D	
Stewed steak	Ireland	1971	1			0.05		1 Eir	
Beef, kidney	The Netherlands	Jan.-Aug.72	36	0.15	1.37	0.63	W.ox. AA	40 NL	
Beef, dinner	Ireland	Jan.71,Mar.72	2	<0.05	0.05	<0.05		1 Eir	
Corned beef	Ireland	Mar.72	1			0.05		1 Eir	
Corned beef	United Kingdom	1970-72	17	0.16	5.5	1.2	W.ox. AA	29 GB	
Beef spread	Ireland	Mar.1972	2	0.01	0.05	0.03		1 Eir	
Pork									
Pork,M.longi.dorsi	Bavaria,F.R.G.	1970-71	10	0.52	1.10	0.77	AA	60 D	
Pork,kidney	The Netherlands	Jan.-Aug.72	33	0.09	1.94	0.51	W.ox. AA	40 NL	
Lard (2 types)	United Kingdom	1970-72	2	0.12	0.30	0.21	W.ox. AA	29 GB	
Pork luncheon	Ireland	Jan.1971	1			0.05		1 Eir	
Lamb									
Lamb dinner	Ireland	1971	1			<0.05		1 Eir	
Chicken									
Liver	The Netherlands	Jan.-Aug.72	33	0.10	1.30	0.31	W.ox. AA	40 NL	
Eggs	United Kingdom	1970-72	10	<0.01	0.10	0.03	W.ox. AA	29 GB	

Element : Lead

Pb.8.5

Medium : Food. Meat and meat products.

Unit : mg/kg material as presented (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
MEAT AND MEAT PRODUCTS										
Miscellaneous										
Muscle	F.R.G.	1971-72	32	0.04	0.96	0.13	AA	55	D	b.c
Organs	F.R.G.	1971-72	33	0.06	1.02	0.35	AA	55	D	b.c
Tinned meat and fish products	Ireland ,W.	1969-71	5	0.3	1.0	0.5		1	Eir	
Turkey and tongue spread	Ireland	Jan.71,Mar.72	2	<0.05	0.05	<0.05		1	Eir	
Composite meat and fish component of the UK diet	United Kingdom,14 towns	1970-72	37	<0.01	0.70	0.17	W.ox. AA	29	GB	

Element : Lead
Medium : Food - Cereals and cereal products
Unit : mg/kg material as presented (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
CEREALS AND CEREAL PRODUCTS									6
Maize	F.R.G.Experimental field			1.04	3.90			50 D	b.c
Wheat (grain)	F.R.G.	1972	10	0.11	0.17	0.14	A.dig. AA	58 D	d.b.c
Cereals	F.R.G.	1971-72	18	0.7	5.8	2.4	Col	55 D	b.c
Flour (3 types)	United Kingdom	1970-72	10	<0.01	0.22	0.06	W.ox. AA	29 GB	
Bread (white)	United Kingdom	1970-72	4	<0.01	0.33	0.15	W.ox. AA	29 GB	
Bread (other types)	United Kingdom	1970-72	3	0.05	0.40	0.17	W.ox. AA	29 GB	
Bread	F.R.G.	1971-72	1			<0.1	Col	55 D	b.c
Corn (canned)	United Kingdom	1970-72	1			1.22	W.ox. AA	29 GB	
Corn (frozen)	United Kingdom	1970-72	3	0.01	0.02	0.01	W.ox. AA	29 GB	
Cereal products	F.R.G.			0.01	1.80			50 D	b.c
Cereal products	F.R.G.	1971-72	18			0.009	Col	55 D	b.c
Composite cereals component of the UK diet	United Kingdom	1970-72	37	<0.01	0.81	0.17	W.ox. AA	29 GB	

Element : Lead

Medium : Food- Cereals and cereal products

Unit : mg/kg material as presented (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
Special cases									
Wheat	Highway near Hannover, F.R.G. Distance :	1972							
	10m		3			0.56	A.dig. AA	58 D	b.c
	50m		3			0.44	A.dig. AA	58 D	b.c
	350m		3			0.28	A.dig. AA	58 D	b.c
	Vicinity of a zinc metallurgical plant . Distance :	1972							Sampling in wind direct
	0.2km		1			1.2	A.dig. AA	58 D	b .c
	0.5km		1			0.95	A.dig. AA	58 D	b.c
	1 km		1			0.42	A.dig. AA	58 D	b.c
	2.5km		1			0.20	A.dig. AA	58 D	b.c

Element : Lead
Medium : Food - Vegetables
Unit : mg/kg material as presented (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
VEGETABLES										6.
Fresh										
Beans	Ireland	Jan.1971	1			0.07		1	Eir	
	F.R.G.	1971-72	6	0.02	8.9	1.7	Col	55	D	c
Brussels sprouts	Belgium, experimental farm	Jan.1973	2	0.12	0.14	0.13	Calc. AA	32	B	
	United Kingdom	1970-72	16	<0.01	0.24	0.05	W.ox. AA	29	GB	
Cabbages	F.R.G.	1971-72	44	0.03	9.7	1.2	Col and AA	55	D	c
	United Kingdom	1970-72	23	<0.01	0.51	0.08	W.ox. AA	29	GB	
Carrots	United Kingdom	1970-72	8	<0.01	0.04	0.02	W.ox. AA	29	GB	
	Ireland	Jan.1971	1			<0.05		1	Eir	
Carrots (diced)	Ireland	Mar.1972	1			0.05		1	Eir	
Celery (green)	Belgium, experimental farms	Jan.1973	2	0.11	0.17	0.14	Calc. AA	32	B	
Leeks	United Kingdom	1970-72	4	0.04	0.07	0.06	W.ox. AA	29	GB	
Lettuce	F.R.G.	1971-72	22	0.16	6.0	1.04	Col and AA	55	D	c
Onions	United Kingdom	1970-72	11	<0.01	0.38	0.06	W.ox. AA	29	GB	
Parsley	F.R.G.	1971-72	4	1.1	3.0	2.2	AA	55	D	c
Peas	Ireland	1971	1			2.0		1	Eir	
Potatoes	United Kingdom	1970-72	19	<0.01	0.14	0.04	W.ox. AA	29	GB	
Scorzonera	Belgium, experimental farms	Jan.1973	2	<0.1	1.88	1.0	Calc. AA	32	B	
Tomato mash	The Netherlands		3	0.03	2.70		W.ox. AA	40	NL	
Water-cress	United Kingdom	1970-72	4	0.08	0.38	0.15	W.ox. AA	29	GB	

Element : Lead

Medium : Food - Vegetables

Unit : mg/kg material as presented (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
VEGETABLES										
Fresh										
Various vegetables	F.R.G.	1971-72	39			0.13		55	D	b.c
	F.R.G.			0.03	1.95			50	D	b.c
Paprika, tomatoes, gherkin	F.R.G.	1971-72	18	0.03	0.3	0.18	AA	55	D	b.c
Carrots, radish, horse-radish, celery	F.R.G.	1971-72	6	0.02	0.23	0.07	Col	55	D	b.c
Lecks, onions	F.R.G.	1971-72	4	0.19	1.7	0.61	Col and AA	55	D	
Swedes	United Kingdom	1970-72	8	<0.01	0.05	0.02	W.ox. AA	29	GB	
Head of celery, chicory Witloof, leeks, onions, tomatoes	Belgium, experimental farm	Jan. 1973	10			<0.1	Calc. AA	32	B	
Frozen										
Broad beans	United Kingdom	1970-72	3	0.02	0.08	0.05	W.ox. AA	29	GB	
Broccoli	United Kingdom	1970-72	3	0.02	0.04	0.03	W.ox. AA	29	GB	
Brussels sprouts	United Kingdom	1970-72	3	0.03	0.08	0.05	W.ox. AA	29	GB	
Green beans	United Kingdom	1970-72	5	0.01	0.03	0.02	W.ox. AA	29	GB	
Peas	United Kingdom	1970-72	6	0.01	0.04	0.02	W.ox. AA	29	GB	
Spinach	United Kingdom	1970-72	4	0.01	0.04	0.02	W.ox. AA	29	GB	

Element : Lead
Medium : Food- Vegetables
Unit : mg/kg material as presented (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
VEGETABLES									
Canned									
Asparagus	United Kingdom	1970-72	2	0.15	0.18	0.17	W.ox. AA	29 Gb	
Beans	F.R.G.	1971-72	10		<0.10			55 D	b.c
Cabbage	F.R.G.	1971-72	4	0.15	1.9		Col	55 D	c
Carrot (whole and sliced)	United Kingdom	1970-72	10	0.11	0.44	0.22	W.ox. AA	29 GB	
Peas (4 types)	United Kingdom	1970-72	22	<0.01	0.72	0.21	W.ox. AA	29 Gb	
Spinach	United Kingdom	1970-72	1			0.95	W.ox. AA	29 GB	
Various	F.R.G.	1971-72	33	0.13	0.48			55 D	c
Miscellaneous									
Vegetables juices	F.R.G.			0.04	0.55			50 D	b.c
Vegetable oil	F.R.G.			0.13	1.70			50 D	b.c
Soja products	F.R.G.			0.06	0.50			50 D	b.c
Flaxgrain products	F.R.G.			0.10	0.60			50 D	b.c
Composite vegetables component of the UK diet :									
- Root vegetables	United Kingdom,14 towns	1970-72	37	<0.01	1.5	0.20	W.ox. AA	29 Gb	
- Green vegetables	United Kingdom,14 towns	1970-72	37	<0.01	1.0	0.24	W.ox. AA	29 Gb	

Element : Lead

Medium : Food- Fruit

Unit : mg/kg material as presented (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
FRUIT									
Fresh									
Apples	United Kingdom, home grown	1970-72					W.ox. AA	29 GB	
-whole fruit			12	<0.01	0.16	0.01			
-skin			13	<0.01	0.24	0.07			
-flesh			13			0.01			
Apples	Imported in U.K, from	1970-72					W.ox. AA	29 GB	
	- Tasmania		31	0.10	4.8	0.86			
	- Queensland		10	<0.01	0.02	0.01			
	- Victoria		25	0.10	1.2	0.39			
	- W.Australia		10	<0.01	0.10	0.01			
	- S.Australia		15	<0.01	0.29	0.07			
	- New South Wales		10	<0.01	0.60	0.17			
	- France		3	<0.01	0.37	0.14			
	- Italy		2			0.01			
4 apples, 4 pears	Belgium, experimental farms	Jan. 1973	8		<0.1		Calc. AA	32 B	
Grapes	Imported in F.R.G.	1971-72	8	0.03	4.0	1.19	AA	55 D	b.c
Pears	United Kingom	1970-72	17	<0.01	0.23	0.10	W.ox. AA	29 Gb	
Fruit	F.R.G.			0.05	4.0			50 D	b.c
Fruit	F.R.G.	1971-72	25			0.047		55 D	b.c

Element : Lead
Medium : Food- Fruit
Unit : mg/kg material as presented (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
FRUIT									
Fresh									
Pipfruit	F.R.G.	1971-72	37	0.01	1.44	0.43	AA	55 D	b.c
	F.R.G.	1971-72	9		<0.10			55 D	b.c
Stonefruit	F.R.G.	1971-72	26	0.01	1.4	0.27	Col.or AA	55 D	b.c
	F.R.G.	1971-72	4		<0.10			55 D	b.c
	F.R.G., imported	1971-72	7	0.027	1.10	0.44	AA	55 D	b.c
Berries	F.R.G.	1971-72	8	0.08	16.6		AA	55 D	c
	F.R.G., imported	1971-72	5	0.25	1.4	0.51	Col	55 D	c
	F.R.G., imported	1971-72	2		<0.02		Col	55 D	b.c
Canned									
Pineapple - fruit	Imported in F.R.G.	1971-72	4	0.19	0.70		AA	55 D	c
- juice			4	0.13	0.76		AA	55 D	c
Pipfruit	F.R.G. (home grown)	1971-72	2	0.4	0.6			55 D	c
Stonefruit	F.R.G. (home grown)	1971-72	7	0.30	4.10	1.40		55 D	c
	Imported in F.R.G.	1971-72	8	0.08	0.82	0.32	AA	55 D	c
- fruit	Imported in F.R.G.	1971-72	4	0.74	1.40	1.00	AA	55 D	c
- juice			4	0.23	0.57	0.39	AA	55 D	c
Berries	Imported in F.R.G.	1971-72	1			0.18	AA	55 D	c
Mixed fruit	Imported in F.R.G. (USA)	1971-72	1			0.53	AA	55 D	c

Element : Lead

Medium : Food- Fruit

Unit : mg/kg material as presented (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
FRUIT										
Miscellaneous										
Fruit juice	F.R.G.			0.002	0.45			50	D	b.c
Fruit juices(4 varieties), canned	United Kingdom	1970-71	13	<0.01	1.9	0.66	W.ox. AA	29	GB	
Lemon juice	Ireland	Jan.1971	1			<0.05		1	Eir	
Almond essence	Ireland	Jan.1971	1			<0.05		1	Eir	
Composite fruit and preserves component of the UK diet	United Kingdom	1970-72	37	<0.01	0.76	0.12	W.ox. AA	29	GB	

Element : Lead

Medium : Food - Prepared foods.

Unit : mg/kg material as presented (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
PREPARED FOODS									
Baby foods in jars, savoury	United Kingdom	1970-72	12	<0.01	0.27	0.06	W.ox. AA	29 GB	
Baby foods in jars, dessert	United Kingdom	1970-72	12	<0.01	0.11	0.03	W.ox. AA	29 GB	
Baby foods, canned, savoury	United Kingdom	1970-72	40	0.03	1.1	0.27	W.ox. AA	29 GB	
Baby foods, canned, dessert	United Kingdom	1970-72	25	0.01	0.70	0.20	W.ox. AA	29 GB	
Baby food	Ireland, W.	1969-71	66	0.05	0.80	0.19		1 Eir	
	Ireland	Mar.1972	1			0.05		1 Eir	
Dried milk preparations for babies	United Kingdom	1970-72	3	<0.01	0.18	0.08	W.ox. AA	29 GB	
Dried cereal preparations for babies	United Kingdom	1970-72	5	<0.01	0.26	0.11	W.ox. AA	29 GB	
Jam	F.R.G.			0.07	0.80			50 D	b.c
Seasoning	Ireland	Jan.1971	1			0.05		1 Eir	
Puree and sauces	Ireland, W.	1969-71	11	0.2	1.8	0.7		1 Eir	
Soups	F.R.G.			0.80	3.6			50 D	b.c
Soup powders	Ireland, W.	1969-71	7	0.1	1.6	1.2		1 Eir	
Tomato soup	Ireland	Jan.1971	1			0.02		1 Eir	
Vegetables and beef broth	Ireland	Jan.1971	1			0.25		1 Eir	
Vegetables and bone broth	Ireland	Mar.1972	1			0.05		1 Eir	
Vegetable and liver paste	Ireland	Mar.1972	1			0.05		1 Eir	
Spread	Ireland	Mar.1972	1			0.05		1 Eir	

Element : Lead

Medium : Food - Spices, miscellaneous

Unit : mg/kg material as presented (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
SPICES									
Herbs	Ireland,W.	1969-71	21	0.8	17.0	5.2		1 Eir	
Herbs,dried,6 varieties	United Kingdom	1970-72	17	<0.01	14	2.5	W.ox. AA	29 GB	
Mustard	Ireland, W.	1969-71	30	0.2	3.1	1.3		1 Eir	
Seasalt	F.R.G.					0.004		50 D	b.c
Spices	Ireland,W.	1969-71	46	0.2	5.4	1.1		1 Eir	
Vinegar	Ireland	Jan.1971	1			<0.05		1 Eir	
MISCELLANEOUS									
Agar agar	F.R.G.					0.48		50 D	b.c
Cooking oil (3 types)	United Kingdom	1970-72	3	0.10	0.15	0.13	W.ox. AA	29 GB	
Margarine	United Kingdom	1970-72	3	0.04	0.25	0.12	W.ox. AA	29 GB	
Honey	F.R.G.			0.22	0.75			50 D	b.c
Coffee	Ireland,W.	1969-71	2	0.66	1.2	0.94		1 Eir	
Coffee (instant)	United Kingdom	1970-72	3	0.04	0.08	0.07	W.ox. AA	29 GB	
Stock cubes (beef)	United Kingdom	1970-72	4	<0.01	0.44	0.18	W.ox. AA	29 GB	
Stock cubes (chicken)	United Kingdom	1970-72	3	<0.01	0.31	0.11	W.ox. AA	29 GB	
Sugar (6 types)	United Kingdom	1970-72	6			0.01	W.ox. AA	29 GB	
Sweets	Ireland,W.	1969-71	6	0.35	1.50	0.77		1 Eir	
Tea (different brands)	United Kingdom	1970-72	9	<0.01	0.06	0.03	W.ox. AA	29 GB	
Tea	Ireland,W.	1969-71	47	0.3	4.5	1.2		1 Eir	
Tea	F.R.G.			0.18	3.10			50 D	b.c

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
MISCELLANEOUS (continuation)									
Yeast products	F.R.G.			0.06	3.10			50 D	b.c
Composite fats component of the UK diet	United Kingdom, 14 towns	1970-72	37	<0.01	0.40	0.08	W.ox. AA	29 GB	

Element : Lead

Medium : Food -Total diet

Unit : mg/kg material as presented(a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
TOTAL DIET									
Total diet samples, weighted mean, 6 quarters	United Kingdom, 1 to 13 towns, (depending on quarter)	1970-72				~0.13	W.ox. AA	29 GB	e

Remarks :

a- Analysis made - on material as sold in shop (Ref.1)
- on edible portion of the sample as received (Ref.29)
- on wet matter (Ref. 7,40,60)
- on fresh material (Ref.32)

b- Analysis probably made on material as presented, according to the results.

c- Not said if the analysis was made on wet or dry matter.

d- Statistical selection of 2500 samples. Preliminary results.

e- Weighted according to the proportions of the different food groups consumed.

f- For the effects on vegetables of the vicinity of a metal refining pl ant, see Ref.29,p.3

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Particulate matter								
United Kingdom, 7 sampling places	1971-72		0.035	0.380	0.137	X	43 GB	µg/kg air
Federal Republic Germany :								
- München ,residential area	Jun.1972	2	0.42	0.55		W.dig.	45 D	µg/m³
- Frankfurt am Main								
- at street with heavy traffic	Jul.-Dec.72	34	1.05	6.76	3.01	AA	63 D	µg/m³
- residential and office area near the city	Jan.-Dec.72	223	0.08	3.15	0.96	AA	63 D	µg/m³
- Berlin :								
Sampling duration								
-residential area -24h	1967-70	370		4.3		AA	46 D	µg/m³
-traffic area -24h	1967-70	26		7.4		AA	46 D	µg/m³
- 1h	1967-70	165		13.4		AA	46 D	µg/m³
-tunnels -24h	1967-70	18		15.4		AA	46 D	µg/m³
- 1h	1967-70	62		24.9		AA	46 D	µg/m³
Rain (+ fallout)								
United Kingdom, 1 sampling place (pure area)	1971				39	X	43 GB	µg/ℓ

Element : Lead

Medium : Soil

Unit : mg/kg

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
Soil, 0-0.3 m	F.R.G., 4 places			3.0	92.4			50	D	
Garbage compost (5 different)	F.R.G.			4.9	850			50	D	
Clay and sandy soil	F.R.G. Round-about crossroad in Frankfurt- Stadtwald	1971-72	32	8	656	30	AA	72	D	a.On dry ma
Loess formation, in a forest, 5 layers to 1 m depth	Belgium, Meerdael	1964	5	6.2	33	18.2	UV	32	B	
Loess formation, in a semi-industrial region, 6 layers to 1.2 m depth	Belgium, Halle	1964	6	11.8	54	21.2	UV	32	B	
Sandy soil under pines, 3 layers to 0.2 -0.28 m depth	Belgium , Bokrijk	1970	6	9.8	42.5	20.4	UV	32	B	
Sandy soil, cultivated	Belgium, Bredene	1968	2	54	72	63	UV	32	B	
Garden soil with humus	Belgium, Meisse	1968	5	130	180	148	UV	32	B	
Soil, 1.5 km from a metallurgical plant	Belgium	1965		200	600		UV	32	B	

Remarks

a- Concentration depending on distance from road (0.15-40m) and depth in soil (0-50 cm)

Element : Lead
Medium : Miscellaneous
Unit : mg/kg DRY matter

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
PLANTS								
Bredene, Belgium - Sandy soil, cultivated								
- Meadow grass	1968	1			9	UV	32 B	
	1970	3	2.5	5.3	4.1	UV	32 B	
- Wheat	1968	1			4.0	UV	32 B	
- Barley	1968	1			15.0	UV	32 B	
Bokrijk, Belgium - Sandy soil								
- Pine-needles	1970	5	3.4	44	19.3	UV	32 B	
Vicinity of a metallurgical plant, Belgium								
- Pine-needles, spinach, rhubarb	1972	4	23	27	25	UV	32 B	

Mn.1 (1-3) - River water
Mn.2 - Sea water
Mn.3 - River sediments
Mn.4 - Sea sediments
Mn.6 - Sea organisms
Mn.7 - Drinking water
Mn.8 - Food
Mn.9 - Air
Mn.10 - Soil
Mn.11 - Miscellaneous

MANGANESE

Element : Manganese
Medium : River water
Unit : µg/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Danube								
- 2 places (Leipheim, Bad Abbach)	Aug.71-Nov.72	36	12	69	29.5	FA AA	45 D	a
Havel - Spree , Berlin	1971-72	3	0.7	161.3	57.1	AA	46 D	
Weser								
- km 366.2, Bremen	Oct.71-Mar.72	6	135	387	301	AA	46,52 D	c
- Bremen	1971-72	24	9.6	428	183	AA	46 D	
- Bremen	1971-72	100	90	440	225		46 D	
Rhine								
- Bodensee- Lindau	Aug.71-Nov.72	18	3.0	10	7.0	FA AA	45 D	b
- Depth 0m	1971-73	22	1.1	44	7	AA	51 D	
- Depth 40m	1971-73	21	1.3	487	45	AA	51 D	
- Depth 60m	1971-73	22	1.1	41	13	AA	51 D	
- Depth 80m	1971-73	18	1.9	71	11	AA	51 D	
Manheim, km 434	1971-73	23	1.6	56	32	AA	51 D	
- Mainz, km 498.5	1971-73	16	21.4	283	73	AA	51 D	
- Wiesbaden, km 506	1971-73	29	3.3	417	49	AA	51 D	
- Bimmen	1971-72	24	153.5	450	277	AA	46 D	
- Düsseldorf	1971-72	24	66.0	380	161	AA	46 D	

Element : Manganese

Medium : River water

Unit : µg/ℓ

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks
Rhine									
- km 698			70	180	100	AA	54	D	d
- km 865			150	400	250	AA	54	D	d
- km 643-865		4	50	600	180	AA	54	D	
- Tributaries :									
- Zürichsee	1971-73	3			2	AA	51	D	
- Main, Ottendorf , km 345	1971-73	16	3.7	124.1	43	AA	51	D	
Garstadt , km 325	1971-73	15	3.1	121.4	59	AA	51	D	
Kostheim, km 0.5	1971-73	15	19.3	316.6	118	AA	51	D	
- Sieg (mouth)		4	70	310	220	AA	54	D	
- Wupper (mouth)		4	130	230	180	AA	54	D	
- Erft (mouth)		4	120	260	190	AA	54	D	
- Ruhr (mouth)		4	90	160	120	AA	54	D	
- Rheinberger -Altrhein		4	180	500	390	AA	54	D	
- Lippe (mouth)		4	120	530	250	AA	54	D	
Maas									
- from French frontier to above Liege	Sep.71-Dec.72	12	32	95	72	AC GAA	15	B	
- from Liège to Dutch frontier	Sep.71-Dec.72	9	74	223	154	AC.EorGAA	15	B	
- affluents excepting Vesdre	Sep.71-Dec.72	27	21	162	83	AC.EorGAA	15	B	
- affluent Vesdre	Sep.71-Dec.72	7	177	450	265	AC.EorGAA	15	B	

Element : Manganese
Medium : River water
Unit : µg/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.		Ref.		Remarks
Scheldt and affluents from French to Dutch frontiers	Sep.71-Dec.72	13	358	650	488	ACE	AA	15	B	
Yser and affluents from French frontier to the sea	Sep.71-Dec.72	14	115	392	277	ACE	AA	15	B	
Other Belgian tributaries into the North Sea	Sep.71-Dec.72	11	40	255	132	ACE	AA	15	B	
Welsh rivers- Mineralized area	Sep.70-Oct.71	6?	3	28		I.ex	Pol	25	GB	
Welsh " clean" water	Sep.70-Oct.71				0.8	I.ex	Pol	25	GB	
Miscellaneous										
- Running water Region Wiesbaden,33 sampling places	1971-73	182	<1	1428			AA	51	D	60% : <1

a- Continuous sampling for a monthly sample
b- Daily samples composited into a monthly sample
c- 3 times a week-samples composited into a monthly sample
d- Composited weekly samples .

Element : Manganese

Medium : Sea water

Unit : µ g/ℓ

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Re
West of Scotland, Atlantic Ocean	1970	5	0.03	0.09	0.06	FE AA	27 GB	a.b
West of Scotland, coastal area	1970	8	0.02	0.49	0.18	FE AA	27 GB	a.b
Irish Sea :								
- Western part, offshore	1969-70	26	0.15	2.6	0.51	FE AA	27 GB	a.b
- Eastern part, offshore	1969-70	43	0.20	14.6	1.26	FE AA	27 GB	a.b
- Western part, shoreline	1970	9	0.7	10.8	2.2	FE AA	27 GB	a.b
- Eastern part, shoreline	1970	11	2.5	25.5	6.1	FE AA	27 GB	a.b
English Channel, coastal area of UK	1969-70	8	0.10	0.5	0.36	FE AA	27 GB	a.b
North Sea :								
- coastal area of UK	1969-71	44	0.24	15.9	1.48	FE AA	27 GB	a
- Belgian shoreline, 12 sampling places	1971-72	48	14	270	77	ACE AA	15 B	

Remarks :

a - $\bar{X}$ = geometric mean.

b- Percentage of total manganese in filtered water : 19 to 34

Element : Manganese

Medium : River sediments

Unit : mg/kg

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.		Ref.		Remk
Elbe , Hamburg harbour	Feb.73	12	95	1974		A.dig	AA	53	D	a
Maas and affluents from French to Dutch frontiers	Sep.71-Dec.72	46	240	2960	1067		UV	15	B	a
Scheldt and affluents from French frontier to above Ghent	Sep.71-Dec.72	6	230	414	353		UV	15	B	a
Yser and affluents from French frontier to the sea	Sep.71-Dec.72	14	250	1970	524		UV	15	B	a
Other Belgian tributaries into the North Sea	Sep.71-Dec.72	6	300	690	358		UV	15	B	a
Conway(Wales)	1969	143	1000	8500	3260			26	GB	b
- Conway(Wales), estuary	1969	5	300	3000	1500			26	GB	b
- Tributaries from mineralized area (West,former mining activity)	1969	14	1600	>10000	4980			26	GB	b
- Tributaries from unmineralized area (East)	1969	153	300	>10000	3680			26	GB	b

Remarks :

a- On dry matter

b- On 80-mesh fraction .

Element : Manganese

Medium : Sea sediments

Unit : mg/kg

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks
North Sea									
- Belgian shoreline, 11 sampling places	1971-72	43	37	1488	549	UV	15	B	On dry matter
Irish Sea									
- Conway Bay, offshore	1969	3	300	500	400		26	GB	On 80-mesh fraction

Element : Manganese
Medium : Sea organisms
Unit : mg/kg DRY matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
SEAWEEDS									
Fucus vesiculosus	Coastal areas :								
	- West of Scotland	1970	7	33	190	64	W.ox. AA	27 GB	a.b
	- Irish Sea, West	1970	7	34	94	67	W.ox. AA	27 GB	a.b
	- Irish Sea, East	1970	13	52	141	99	W.ox. AA	27 GB	a.b
	- English Channel	1970	7	40	88	65	W.ox. AA	27 GB	a.b
	- North Sea	1970	6	39	123	70	W.ox. AA	27 GB	a.b
Porphyra umbilicalis	Shoreline of Irish Sea :								
(Laverweed)	- West	1970	9	13	72	29	W.ox. AA	27 GB	a
	- East	1970	13	14	93	29	W.ox. AA	27 GB	a
MOLLUSCS									
Patella vulgata (Limpet)	Shoreline of Irish Sea :								
	- West	1970	9	18	94	31	W.ox. AA	27 GB	a
	- East	1970	8	23	88	42	W.ox. AA	27 GB	a

Remarks

a- $\bar{X}$ = geometric mean

b- No significant difference with Fucus sampled in 1961 at the same places.

Element : Manganese
Medium : Drinking water
Unit : µg/l

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
	Surface waters								
Lindau	Bodensee (40m)	Jun.-Dec.72	7	2.0	16	4.5	A AA	45 D	a
Düsseldorf	Rhine	1971-72	23	2.0	387	63.4	AA	46 D	
	Groundwaters								
Mainz	19 groundwaters	1971-73	47	2	48	17	AA	51 D	
Mainz	Mainwater	1971-73	23	4	542	32	AA	51 D	
Wiesbaden	5 Deep galleries	1971-73	40	<1	19	<11	AA	51 D	
Wiesbaden	5 Surface galleries	1971-73	7		<1		AA	51 D	
Wiesbaden	6 Leak galleries	1971-73	11	<1	7.4	<1	AA	51 D	

Remarks :
a- Daily samples composited into a monthly sample.

Element : Manganese
Medium : Food
Unit : mg/kg

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
MILK PRODUCTS										
Butter	The Netherlands	1970 ?	12	0.006	0.040	0.017	NA	34	NL	a
CEREALS										
Maize	F.R.G.Experimental field			7.00	10.50			50	D	
VEGETABLES				4.00	6.10			50	D	

Remarks :

a- On material as sold.

[redacted]

Element : Manganese

Medium : Air

Unit :

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Particulate matter								
United Kingdom, 7 sampling places	1971-72		0.004	0.049	0.021	NA	43 GB	µg/kg air
Federal Republic Germany :								
- München, residential area	Jun.1972	2	0.030	0.034		W.dig.	45 D	µg/m³
- Frankfurt am Main :								
- street with heavy traffic	Jul.-Dec.72	34	0.06	0.27	0.15	AA	63 D	µg/m³
- residential and office area near the city	Jan.-Dec.72	182	0.01	0.32	0.096	AA	63 D	µg/m³
Rain (+ fallout)								
United Kingdom, 1 sampling place (pure area)	1971				8.1	NA	43 GB	µg/ℓ

Element : Manganese

Medium : Soil

Unit : mg/kg

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
Loess formation in a forest, 5 layers to 1 m depth	Belgium, Meerdael	1964	5	113	450	330	UV	32 B	
Loess formation ,in a semi-industrial region, 6 layers to 1.2 m depth	Belgium, Halle	1964	6	135	320	248	UV	32 B	
Sandy soil under pines, 3 layers to 0.2 -0.28 m depth	Belgium, Bokrijk	1970	6	30.4	43.2	34.7	AA	32 B	
Sandy soil, cultivated	Belgium, Bredene	1968	2	240	300	270	UV	32 B	

Element : Manganese
Medium : Miscellaneous
Unit : mg/kg DRY matter

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
PLANTS								
Bredene, Belgium-Sandy soil, cultivated								
- Meadow grass	1968	1			35	UV	32 B	
	1970	3	31.9	45	43	AA	32 B	
- Wheat	1968	1			27.5	UV	32 B	
- Barley	1968	1			47.5	UV	32 B	
Sint Truiden, Belgium								
- Fruit-tree leaves (apple-, pear-, plum-, cherry-trees)	1964	15			149	UV	32 B	
Bokrijk, Belgium -Sandy soil.								
- Pine-needles	1970	5	280	912	578	UV	32 B	
Vicinity of a metallurgical plant, Belgium								
- Pine-needles, spinach, rhubarb	1972	5	14	42	26	AA	32 B	

Hg.1 (1-6) - River water
Hg.2 - Sea water
Hg.3 (1-3) - River sediments
Hg.4 - Sea sediments
Hg.5 (1-7) - Fresh water organisms
Hg.6 (1-24)- Sea organisms
Hg.7 - Drinking water
Hg.8 (1-20)- Food
Hg.9 - Air
Hg.11(1-2) - Miscellaneous

MERCURY

Element : Mercury
Medium : River water
Unit : µg/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.		Ref.		Remarks
Danube										
- 2 places (Leipheim, Bad Abbach)	Aug.71-Nov.72	32	0.02	0.28	0.07	F	FlAA	45	D	a
- Danube	Jan.-Apr.72	10	<0.1	0.3		AF	FlAA	50	D	
- Tributaries :										
- Lech	Jan.-Apr.72	5	<0.1	0.5		AF	FlAA	50	D	
- Inn	Jan.-Apr.72	5	<0.1	0.3		AF	FlAA	50	D	
- Isar	Jan.-Apr.72	5	<0.1	0.25		AF	FlAA	50	D	
Havel-Spree, Berlin	1971-72	5	0.4	0.9	0.5	F	AA	46	D	b
Weser										
- Bremen	1971-72	24	<0.05	2.5	0.5	F	AA	46	D	b
- Bremen, km 366.2	Oct.71-Mar.72	6	0.3	1	1		AA	52	D	c
Rhine										
- Bodensee- Lindau	Aug.71-Nov.72	16	0.03	0.38	0.17	F	FlAA	45	D	b
- Depth 0m	1971-73	21			<0.2		AA	51	D	
- Depth 40m	1971-73	21			<0.2		AA	51	D	
- Depth 60m	1971-73	20			<0.2		AA	51	D	
- Depth 80m	1971-73	18			<0.2		AA	51	D	
- Mannheim , km 434	1971-73	22	0.01	2.4	1.2		AA	51	D	
- Mainz , km 498.5	1971-73	15	0.1	3.1	2.1		AA	51	D	
- Wiesbaden, km 506	1971-73	24	0.03	8.4	0.19		AA	51	D	

Element : Mercury
Medium : River water
Unit : µg/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.		Ref.		Remarks
Rhine										
- Braubach , km 581	Oct.72-Mar.73	9	0.4	1.6	0.81		FlAA	48	D	total
Braubach, km 581	Jul.72-Mar.73	13	0.1	0.8	0.35	F	FlAA	48	D	dissolved
- Koblenz, km 590.3	Sep.72-Mar.73	93	<0.1	1.3	0.44		FlAA	48	D	total
Koblenz, km 590.3	Sep.72-Mar.73	93	<0.1	1.1	0.18	F	FlAA	48	D	dissolved
- Bimmen	1971-72	24	0.2	3.0	0.8	F	AA	46	D	b
- Düsseldorf	1971-72	24	0.2	2.0	0.8	F	AA	46	D	b
- Emmerich	Jan.-Oct.72	8	0.7	3.4			AA	48	D	
Emmerich , km 865	Oct.72-Mar.73	10	0.7	3.3	2.0		FlAA	48	D	total
Emmerich , km 865	Jul.72-Mar.73	16	0.1	2.1	0.84	F	FlAA	48	D	dissolved
- Waal, above Nijmegen	Sep.69-Dec.70							6.1	NL	
Flow class : <1500 m3/sec		34	<0.1	4.0						50-100% in susp.matter
1500-2500		33	<0.1	3.5						50-100% in susp.matter
2500-3500		26	0.3	2.2						50-100% in susp.matter
>3500		39	0.2	1.9						50-100% in susp.matter
- Waal near Nijmegen	1972	39	0.5	5.7	1.68	A	FlAA	41	NL	~68% in susp. matter
- Ketelmeer(near mouth of Ijssel)	1971-72	17	0.1	1.2	0.40	A	FlAA	41	NL	
- Ijsselmeer	1970	11	0.1	0.7				6.1	NL	

Element : Mercury

Medium : River water

Unit : ug/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Rhine								
- At places of pumping of drinking water plants (The Netherlands)	1969-70	25	<0.1	1.5	0.3		6.1 NL	6
- Tributaries :								
- Zurichsee	1971-73	3			<0.2	AA	51 D	
- Main, Ottendorf, km 345	1971-73	14	0.01	0.39	0.15	AA	51 D	
Garstadt, km 325	1971-73	15	0.01	0.77	0.30	AA	51 D	
Kostheim, km 0.5	1971-73	14	0.007	3.8	0.60	AA	51 D	
- Main	Jan.-Apr.72	10	< 0.1	0.4		AF FlAA	50 D	
- Sûre ,Dam of Esch/Sûre, 4 sampling places	1972	11	< 0.03	0.11	0.03	AA	9 L	
- Sieg (mouth)		1			0.62	AA	54 D	
- Wupper (mouth)		1			0.98	AA	54 D	
- Erft (mouth)		1			0.62	AA	54 D	
- Ruhr , part a	1971-73	53	<0.03	0.23	0.03	F AA	47 D	e Week averages
part b	1971-73	53	<0.03	0.28	0.05	F AA	47 D	e Week averages
part c	1971-73	6	0.04	0.08	0.06	F AA	47 D	e-month averages
part d	1971-73	6	0.04	0.05	0.05	F AA	47 D	e-month averages
(mouth)		1			0.2	AA	54 D	
- Rheinberger - Altrhein		1			5.6	AA	54 D	
- Lippe (mouth)		1			2.92	AA	54 D	

Element : Mercury
Medium : River water
Unit : µg/ℓ

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Maas								
- Maas and affluents (excepting Sambre) from French to Dutch frontiers	Sep.71-Dec.72	57	0.07	2.15	0.57	AC FℓAA	15 B	
- Affluent Sambre (industrial area	Sep.71-Dec.72	70	<0.1	9.2	1.2	AF GAA	14 B	
- Eijsden	1971-72	16	<0.1	0.5	0.16	A FℓAA	41 NL	
- Keizersveer	1972	7	<0.1	0.3	0.11	A FℓAA	41 NL	
- Grave	1971	6	0.3	1.3	0.6		5 NL	
Scheldt								
- Scheldt and affluents from French to Dutch frontiers	Sep.71-Dec.72	13	0.02	0.31	0.17	AC FℓAA	15 B	
- From above Antwerp to Dutch frontier (tital zone)	Oct.72	33	0.01	2.15	0.48	FℓAA	13.8 B	
Yser and affluents from French frontier to the sea	Sep.71-Dec.72	14	0.09	1.16	0.39	AC FℓAA	15 B	
Other Belgian tributaries into the North Sea	Sep.71-Dec.72	10	0.05	0.65	0.30	AC FℓAA	15 B	
Thames , tidal zone								
- Teddington (Cl^- = 39 mg/ℓ)	May 71	1			0.045	Ox.Ag.FℓAA	17 GB	87 to 98% in susp.matter

Element : Mercury

Medium : River water

Unit : µg/ℓ

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Thames, tidal zone								
- Woolwich (Cl^- = 3610 mg/ℓ)	May 71	1			0.328	Ox.Ag.FlAA	17 GB	87 to 98% in susp.matter
- Gravesand (Cl^- = 10030mg/ℓ)	May 71	1			0.446	Ox.Ag.FlAA	17 GB	87 to 98% in susp.matter
- Southend (Cl^- = 16480mg/ℓ)	May 71	1			0.082	Ox.Ag.FlAA	17 GB	87 to 98% in susp.matter
Effluent from Northern Outfall Sewage Works	May 71	1			2.85	Ox.Ag.FlAA	17 GB	g.82% in susp. matter
Southampton water, estuary (tidal zone) with affluents Test and Itchen	Sep.70-Jan.71	15			0.011	A.I.exCol	16 GB	h.
Miscellaneous								
- 19 big drinking water reservoirs of F.R.G.	1971-73	734	<0.03	0.40	<0.03	AA	47 D	
- Dutch agricultural regions, at places of pumping of drinking water plants	1969-70	45	<0.1	1.5	0.35		6.1 NL	i.
- Dutch rural and horticultural regions	1969-70	163	<0.1	2.5	0.35		6.1 NL	

Element : Mercury
Medium : River water
Unit : µg/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Miscellaneous								
- Canal below a factory- The Netherlands	1969-70	5		21			6.1 NL	
- Grindstedt river, Denmark								
- above Grindstedt town	1968-70	3	0.42	1.6	1.04	NA	22 DK	i.
- below Grindstedt town	1968-70	3	0.56	7.0	4.45	NA	22 DK	i.

Remarks :

a- Continuous sampling for a monthly sample.
b- Daily samples composited into a monthly sample.
c- 3 times a week-samples composited into a monthly sample.
d- Composited weekly sample.
e- Continuous sampling.
f- After purification ,concentration in drinking water < 0.1
g- This effluent enters the Thames between Woolwich and Gravesand
h- Region of very low or negligible pollution by Hg
i- Grindstedt town includes a large industrial source of Hg

Element : Mercury

Medium : Sea water

Unit : µg/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Waddenzee (The Netherlands)	1970	4		0.2			6.1 NL	Receives Rhine water
North Sea , Belgian shoreline, 12 sampling places	1971-72	46	0.03	0.76	0.15	AC FlAA	15 B	
English Channel, 2 sampling places	Sep.70-Jan.71	14			0.018	AI.ex Col	16 GB	
Irish Sea :								
- Central area	1971-72			0.025		FA FlAA	66 GB	
- Northern and Southern areas	1971-72		0.025	0.050		FA FlAA	66 GB	
- Some places of Eastern area (Morecambe Bay)	1971-72		0.050	0.400		FA FlAA	66 GB	
Open ocean surface water :								
- Eastern North Atlantic , mid latitudes	1972	3	0.067	0.127	0.088	CAE FlAA	67 GB	
- from West of Africa, around Africa, to Japan	1972	25	<0.0005	0.113	0.036	CAE FlAA	67 GB	

Element : Mercury
Medium : River sediments
Unit : mg/kg

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks
Danube									
-	Winter 71-72		0.6	3.0	1.5	AA	44	D	a
-	Jan-Apr.72	10	0.41	6.0		FlAA	50	D	
- 3 sampling places	Apr.-Oct.72	5	1.3	4.0	2.26	FlAA	45	D	
- Tributaries :									
- Lech	Apr.-Oct.72	6	0.04	33.8		FlAA	50	D	
- Isar	Apr.-Oct.72	1			0.12	FlAA	50	D	
- Regen	Apr.-Oct.72	1			0.04	FlAA	50	D	
Elbe	Winter 71-72		3.9	14.2	7.6	AA	44	D	a
Weser	Winter 71-72		1.0	7.0	2.3	AA	44	D	a
Ems	Winter 71-72		2.0	11.0	4.4	AA	44	D	a
Rhine									
- Bodensee (east part)	1969-72	20	0.11	0.58	0.3	FlAA	45	D	
- On the territory of West Germany	Winter 71-72		1.2	17.8	6.3	AA	44	D	a
- Biesbosh	1969-70				23.3	NA	6.2	NL	c
- Noorderleeg	1969-70				2.7	NA	6.2	NL	c
- Julianapolder	1969-70				1.3	NA	6.2	NL	c
- Uithuizerwad polder	1969-70				1.6	NA	6.2	NL	c

Element : Mercury

Medium : River sediments

Unit : mg/kg

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks
Rhine									
- Tributaries :									
- Neckar	Winter 71-72		0.3	2.2	1.1	AA	44	D	a
- Main	Winter 71-72		0.9	13.6	5.0	AA	44	D	a
- Dam of Esch /Sûre	Apr.-Sep.72	8	<0.02	1.08		AA	9	L	b.d
- Rhine + Neckar + Main	1969-71	50	0.4	12		NA?	49	D	
Maas									
- from French frontier to above Liège	Sep.71-Dec.72	17	0.05	0.68	0.27	FlAA	15	B	b
- from Liège to Dutch frontier	Sep.71-Dec.72	8	0.82	1.69	1.23	FlAA	15	B	b
- Tributaries :									
- tributaries excepting Sambre and Vesdre	Sep.71-Dec.72	18	0.02	0.67	0.17	FlAA	15	B	b
- Sambre	Sep.71-Dec.72	1			2.56	FlAA	15	B	b
- Vesdre	Sep.71-Dec.72	2	1.10	1.30	1.20	FlAA	15	B	b
Scheldt and affluents from French to Dutch frontiers	Sep.71-Dec.72	5	0.09	1.28	0.39	FlAA	15	B	b
Yser and affluents from French frontier to the sea	Sep.71-Dec.72	14	0.02	0.17	0.05	FlAA	15	B	b
Other Belgian tributaries into the North Sea	Sep.71-Dec.72	6	0.05	0.69	0.30	FlAA	15	B	b

Element : Mercury
Medium : River sediments
Unit : mg/kg

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks
Miscellaneous									
- Grindstedt river :									
- above Grindstedt town	1971-72	7	0.007	0.044	0.026	NA	22	DK	b
- below Grindstedt town	1971-72	6	1.85	6.61	3.62	NA	22	DK	b.e
- 19 big drinking water reservoirs of F.R.G	1965-72	279		<0.02		AA	47	D	b
		89	0.02	0.92		AA	47	D	b
- Lake Windermere, England, rural area :									
- Depth 0-15 cm (1972-1915)	1972				1.026	FlAA	68	GB	
Depth 15-26cm (1915-1870)	1972				0.608	FlAA	68	GB	
Depth 26-44cm (1870-1400)	1972				0.286	FlAA	68	GB	
Depth 44-78cm (1400-520)	1972				0.122	FlAA	68	GB	

Remarks : a- On clay fraction <2 µm . Sedimentair clay as comparison :0.4
b- On dry matter
c- On fraction < 16µm .
d- 2 sampling places + sediment on the filters of the water purification plant.
e- Grindstedt town includes a large industrial source of Hg.

Element : Mercury
Medium : Sea sediments
Unit : mg/kg

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Baltic Sea								
- Flensburg fjord								
- Western part, 3 sampling places	May -Oct.70	19	0.26	3.5	1.14	E FlAA	62 DK	On dry matter
- Eastern part (sea side)4 sampling places	May -Oct.70	15	0.04	0.54	0.27	E FlAA	62 DK	On dry matter
- Aarhus Bay	1971-72	19	0.007	1.255	0.325	NA	22 DK	On dry matter
North Sea								
- Belgian shoreline , 11 sampling places	1971-72	43	0.01	1.24	0.36	UV	15 B	On dry matter
English Channel								
- Southampton water (estuary)								
- surface of sediment	1970-71	3	0.19	0.64			16 GB	a.On wet matte
- underlaying anoxic layer (depth 10 cm)	1970-71	2	2.2	5.7			16 GB	a.On wet matte

Remarks :

a. Region of very low or negligible pollution by Hg.

Element : Mercury
Medium : Fresh water organisms . Plants
Unit : mg/kg

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
WATERPLANTS										
Plants	Danube	Jan.-Apr.72	4	2.71	13.1		A.dig.FlAA	50	D	Wet or dry matter ?
	Lech	Jan.-Apr.72	1			0.39	A.dig.FlAA	50	D	Wet or dry matter ?
	Inn	Jan.-Apr.72	2	1.11	1.85	1.48	A.dig.FlAA	50	D	Wet or dry matter ?
	Isar	Jan.-Apr.72	2	0.12	0.19	0.15	A.dig.FlAA	50	D	Wet or dry matter ?
	Kahlquelle	Jan.-Apr.72	2	0.03	0.15	0.09	A.dig.FlAA	50	D	Wet or dry matter ?
	Dam of Esch/Sûre	Jun.-Sep.72	2	0.10	0.70	0.40	AA	9	L	On DRY matter
	Ruhr	1970-72	64	0.03	0.64	0.2	AA	47	D	On DRY matter
	Ruhr	1971	49	0.03	0.43	0.16	W.ex. FlAA	61	D	Wet or dry matter?
Moss	Ruhr	1971	15	0.03	0.64	0.25	W.ex. FlAA	61	D	Wet or dry matter ?
Plants	19 big drinking water reservoirs of F.R.G.	1965-72	64	0.10	0.50	0.27	AA	47	D	On DRY matter

Element : Mercury
Medium : Fresh water organisms . Fish
Unit : mg/kg WET matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
FISH										
Percidae										
Perca fluviatilis (Perch)	The Netherlands	Oct.-Dec.70	6	0.57	1.90	0.85	NA	6.5	NL	
	United Kingdom	1970-71	19	0.07	0.60	0.30	W.ox.FlAA	28	GB	b
	United Kingdom	1972	6	0.09	0.34	0.20	W.ox.FlAA	69	GB	b
	Fed.Rep.Germany	1971-73	1			0.547	NA	59	D	
Lucioperca sandra										
(Pike-perch)	The Netherlands	Oct.-Dec.70	7	0.12	0.71	0.42	NA	6.5	NL	
	Fed.Rep.Germany	1971-73	3	0.083	0.477	0.284	NA	59	D	
Esocidae										
Esox lucius (Pike)	The Netherlands	Oct.-Dec.70	3	0.19	0.59	0.44	NA	6.5	NL	
	United Kingdom	1970-71	98	0.08	1.6	0.47	W.ox.FlAA	28	GB	b
	United Kingdom	1972	25	0.06	1.3	0.52	W.ox.FlAA	69	GB	b
	Fed.Rep.Germany	1971-73	3	0.328	0.733	0.480	NA	59	D	
	Belgian market	Nov.71-Nov.72	2	0.15	0.70	0.425	FlAA	18	B	
	Denmark:									
	- 4 un-poll.lakes	1968-72	12	0.2	0.44	0.33	NA	23	DK	
	- 1 other lake	1968-72	5	0.45	0.82	0.64	NA	23	DK	
	- Grindstedt river	1968-72	15	1.7	10.8	5.0	NA	23	DK	c

Element : Mercury
Medium : Fresh water organisms - Fish.
Unit : mg/kg WET matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
FISH										
Anguillidae										
Anguilla anguilla (Eel)	Fed.Rep.Germany	1971-73	1			0.225	NA	59	D	
	United Kingdom	1970-71	6	0.12	0.31	0.22	W.ox.FlAA	28	GB	b
	United Kingdom	1972	40	0.07	0.30	0.16	W.ox.FlAA	69	GB	b
	Belgian market	Nov.71-Nov.72	11	0.06	0.41	0.19	FlAA	18	B	
	The Netherlands :									
	- Ijsselmeer	Oct.-Dec.70	30	0.05	0.82	0.49	NA	6.5	NL	d
	- other regions	Oct.-Dec.70	15	0.06	0.26	0.14	NA	6.5	NL	
Cyprinidae										
Rutilus rutilus (roach)	United Kingdom	1970-71	43	0.03	1.4	0.39	W.ox.FlAA	28	GB	b
	United Kingdom	1972	4	0.11	0.35	0.24	W.ox.FlAA	69	GB	b
	Fed.Rep.Germany	1971-73	5	0.156	0.312	0.233	NA	59	D	
Abramis brama (bream)	United Kingdom	1970-71	20	0.06	0.18	0.13	W.ox.FlAA	28	GB	b
Bream-roach hybrid	United Kingdom	1970-71	2	0.19	0.26	0.22	W.ox.FlAA	28	GB	b
Leuciscus cephalus (Chub)	United Kingdom	1970-71	17	0.17	0.67	0.36	W.ox.FlAA	28	GB	b
Leuciscus leuciscus (Dace)	United Kingdom	1970-71	2	0.09	0.15	0.12	W.ox.FlAA	28	GB	b
Tinca vulgaris (Tench)	Fed.Rep.Germany	1971-73	3	0.188	0.879	0.515	NA	59	D	
	United Kingdom	1972	9	0.19	0.37	0.28	W.ox.FlAA	69	GB	b

Element : Mercury

Medium : Fresh water organisms . Fish

Unit : mg/kg WET matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
FISH										
Salmonidae										
Salmo salar										
Parr (juvenile salmon wich has not entered sea)	United Kingdom	1970-71	7	0.05	0.16	0.10	W.ox.FlAA	28	GB	b
Salmo trutta										
Finnoch (juvenile brown trout)	United Kingdom	1970-71	3	0.06	0.24	0.14	W.ox.FlAA	28	GB	b
Brown trout, having spout all its life in fresh water	United Kingdom	1970-71	36	0.01	1.1	0.16	W.ox.FlAA	28	GB	b
	United Kingdom	1972	167	0.02	0.26	0.09	W.ox.FlAA	69	GB	b
Sea trout, having spent all except the first year of his life in sea water	United Kingdom	1970-71	60	0.01	1.0	0.33	W.ox.FlAA	28	GB	b
	United Kingdom	1972	47	0.01	0.12	0.04	W.ox.FlAA	69	GB	b
Salmo Gairdnerii (Rainbow trout)	United Kingdom	1972	29	0.02	0.08	0.03	W.ox.FlAA	69	GB	b
Trout-	Belgian market	Nov.71-Nov.72	22	<0.01	0.12	0.04	FlAA	18	B	
	Fed.Rep.Germany	1971-73	2	0.042	0.082	0.062	NA	59	D	

Element : Mercury

Medium : Fresh water organisms . Fish

Unit : mg/kg WET matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
FISH										
Salmonidae										
Trout	An area of localized contamination (U.K) :	1972								
	- In stream at source of contamination		4	3.4	20	11	W.ox.FlAA	69	GB	b
	- In stream below source of contamination (up to 1 km)		20	0.10	9.0	2.8	W.ox.FlAA	69	GB	b
	- At confluence with river		14	0.12	5.8	1.3	W.ox.FlAA	69	GB	b
	- In river approx.3 km downstream		5	0.17	0.32	0.23	W.ox.FlAA	69	GB	b
Thymallus thymallus (Grayling)	An area of localized contamination (U.K) :	1972								
	- In stream at source of contamination		6	6.1	12	8.6	W.ox.FlAA	69	GB	b
	- In stream below source of contamination (up to 1 km)		4	0.16	4.7	1.8	W.ox.FlAA	69	GB	b
	- At confluence with river		15	0.12	0.61	0.39	W.ox.FlAA	69	GB	b
	- In river approx.3 km downstream		8	0.15	0.39	0.24	W.ox.FlAA	69	GB	b

Element : Mercury

Medium : Fresh water organims - Fish.

Unit : mg/kg WET matter (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
FISH										
Various species	Fed.Rep.Germany	1971-72	275	0.01	0.40		AA	55	D	
	Danube	1971-72	82	0.01	1.90	0.49	AA	55	D	
	Danube	1971-72	176		<0.5		AA	55	D	
	Rhine	1971-72	67	0.02	0.81	0.23	AA	55	D	
	Dam of Esch/Sûre	1972	2	0.56	0.98	0.77	AA	9	L	On dry matter
	Ruhr	1965-72	16	0.10	0.50	0.27	AA	47	D	On dry matter
	19 big drinking water reservoirs in F.R.G	1970-72	65	0.13	9.2	1.9	AA	47	D	On dry matter
ORGANS OF FISH										
Trout										
- Breeders, 7 year old - Liver			6	0.11	0.14	0.12		40	NL	
Kidney			6	0.08	0.15	0.12		40	NL	
Meat			6	0.07	0.09	0.08		40	NL	
Heart			6	0.09	0.15	0.11		40	NL	
- Commercial, 1,5 year old - Liver			6	0.02	0.10	0.06		40	NL	
Kidney			6	0.09	0.14	0.12		40	NL	
Meat			6	0.06	0.08	0.07		40	NL	

Element : Methyl- mercury
Medium : Fresh water organisms - Fish.
Unit : mg/kg WET matter (expressed as mercury)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
FISH, methyl-mercury										
Perch	Ijsselmeer, the Ned.	Apr.69	5	0.6	1.2	1.0		6.4	NL	d
Pike-perch	Ijsselmeer, the Ned.	Apr.69-Nov.70	10	0.02	0.7	0.12		6.4	NL	d
Eel	Ijsselmeer, the Ned.	Aug.68-Sep.69	15	0.1	1.3	0.7		6.4	NL	d
Eel- 14 year old	Ijsselmeer, the Ned.	Sep.69-Oct.70	2	1.5	1.8	1.65		6.4	NL	d
Roach	Ijsselmeer, the Ned.	Apr.69	7	0.4	1.0	0.73		6.4	NL	d
Bream	Ijsselmeer, the Ned.	Apr.69	6	0.4	1.5	0.63		6.4	NL	d
Pike	Different Dutch surface waters	Sep.-Nov.69	15	0.4	1.2	0.77		6.4	NL	d

Remarks :
a- Unless otherwise specified
b- On edible portion of the sample as received
c- Grindstedt town on Grindstedt river includes a large industrial source of mercury.
Sale of pike from Grindstedt river prohibited.
d- Ijsselmeer receives a part of the water of the Rhine .

Element : Mercury

Medium : Sea organisms - zooplancton, seaweeds, annelidae

Unit : mg/kg WET matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
ZOOPLANCTON	The Netherlands, Waddenzee	1969-70	0.5 litre			0.40	NA	6.7 NL	a- Methyl-Hg as Hg :0.012
SEAWEEDS									
Fucus vesiculosus	The Netherlands, Waddenzee	1969-70	2-3			0.070	NA	6.7 NL	a
Ulva lactuca	The Netherlands, Waddenzee	1969-70	2-3			0.139	NA	6.7 NL	a
Enteromorpha sp.	The Netherlands, Waddenzee	1969-70	2-3			0.046	NA	6.7 NL	a
ANNELIDAE									
Arenicola marina	The Netherlands, Waddenzee	1969-70	~20			0.033	NA	6.7 NL	a

Element : Mercury
Medium : Sea organisms - Molluscs.
Unit : mg/kg WET matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks
MOLLUSCS.										
Venus verrucosa (quahaug)	French coastal areas of Atlantic	1971-72	5	0.03	0.11	0.056	FlAA	11	F	
Cardium edule (Cockel)	The Netherlands,Waddenzee	1969-70	20	0.067	0.113	0.089	NA	6.7	NL	a
	Coastal areas of England and Wales	1970-71	4	0.02	0.12	0.07	W.ox.FlAA	28	GB	c.b.g
Tapes decussatus (clam)	French coastal areas of Atlantic	1971-72	2			0.07	FlAA	11	F	
Mercenaria mercenaria(clam)	Southampton water	1970-71	5	0.03	0.12		NA	16	GB	d
Macoma balthica (clam)	The Netherlands,Waddenzee	1969-70	120	0.085	0.107	0.100	NA	6.7	NL	a
Ostrea edulis (oyster)	Coastal areas of England and Wales	1970-71	5	0.03	0.20	0.11	W.ox.FlAA	28	GB	c.b.g
	Ireland,Galway Bay	May 72-Mar.73	12	<0.02	0.02	<0.02		1	Eir	
	French coastal areas of Atlantic	1971-72	9	0.02	0.10	0.06	FlAA	11	F	
Crassostrea angulata (oyster)	Mediterr.French coast	1971-72	8	0.04	0.21	0.133	FlAA	11	F	
Chlamys opercularis(Queen scallop)	Mersey estuary	1972	2	0.08	0.28	0.18	W.ox.FlAA	69	GB	c.b
Pecten maximus (Scallop)	Atlantic,French coast	1971-72	6	0.04	0.11	0.056	FlAA	11	F	
	Mersey estuary	1972	1			0.08	W.ox.FlAA	69	GB	c.b

Element : Mercury

Medium : Sea organisms -Molluscs.

Unit : mg/kg WET matter

Hg.6.3

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
MOLLUSCS.										
Mytilus edulis (mussel)	Coastal areas of England and Wales	1970-71	8	0.02	0.65	0.18	W.ox.FlAA	28	GB	b.c.g
	Belgian market	Nov.71-Nov.72	6	0.09	0.12	0.11	FlAA	18	B	
	English Channel, French side	1971-72	108	0.01	0.13	0.059	FlAA	11	F	c
	French coast of Atlantic	1971-72	82	0.01	0.24	0.075	FlAA	11	F	c
	The Netherlands, Waddenzee	1969-70	238	0.08	0.23	0.123	NA	6.7	NL	a
	Whole Dutch coast except Waddenzee	1969-70	243	0.11	0.31	0.189	NA	6.7	NL	
	Dutch shore and Delta :									
	- Westerschelde	Mar.71-Fev.72	56	0.062	0.312	0.144	NA	30.4	NL	c
	- Oosterschelde	Mar.71-Fev.72	47	0.066	0.282	0.126	NA	30.4	NL	c
	- From Hoek van Holland to Den Helder	Mar.71-Fev.72	39	0.040	0.208	0.144	NA	30.4	NL	c
	- West Waddenzee	Mar.71-Fev.72	53	0.075	0.264	0.138	NA	30.4	NL	a.c
	- East Waddenzee	Mar.71-Fev.72	36	0.053	0.163	0.101	NA	30.4	NL	a.c
	- Ems estuary, Dollard	Mar.71-Fev.72	26	0.177	0.587	0.299	NA	30.4	NL	c
Mytilus galloprovincialis (mussel)	French coast of Mediterr.	1971-72	185	0.01	0.31	0.20	FlAA	11	F	c
Buccinum undatum (Whelk)	Masey estuary	1972	1			0.28	W.ox.FlAA	69	GB	b.c
Patella vulgata (Limpet)	Severn estuary, south shore	1971-72	10	0.02	0.31	0.07	AA	21	GB	

Element : Mercury
Medium : Sea organisms - Crustaceans
Unit : mg/kg WET matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
CRUSTACEANS										
Crangon crangon (Brown shrimp)	The Netherlands.Waddenzee	1969-70	50			0.12	NA	6.7	NL	a.Methyl-Hg as Hg:0.067
	Belgian market	Nov.71-Nov.72	12	<0.01	0.22	0.13	FlAA	18	B	
	Belgian shore	1972	99	0.04	0.20	0.11	FlAA	32	B	
	Thames estuary	1971-72	1			0.19	W.ox.FlAA	28	GB	c
	Mersey estuary	1971-72	1			0.21	W.ox.FlAA	28	GB	c
Pandalus montagui (Pink shrimp)	Thames estuary	1971-72	1			0.15	W.ox.FlAA	28	GB	c
Shrimps	French coastal areas	1971		0.01	0.03	0.02	FlAA	31	F	

Element : Mercury

Medium : Sea organisms . Crustaceans.

Unit : mg/kg WET matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
CRUSTACEANS									
Cancer pagurus (Crab)	Coastal waters of England and Wales :						W.ox.FlAA	69 GB	g
	- Southern North Sea and English Channel								
	- claw meat	1972	23	0.09	0.54	0.19			
	- body meat	1972	23	0.08	0.45	0.21			
	- Irish Sea								
	- claw meat	1972	4	0.32	0.62	0.54			
	- body meat	1972	4	0.28	0.49	0.39			
	Coastal waters of Scotland						W.ox.FlAA	69 GB	g
	- claw meat	1972	66	0.02	0.50	0.16			
	- body meat	1972	71	<0.01	0.17	0.05			
Homarus vulgaris (Lobster)	Landed in Scotland						W.ox.FlAA	69 GB	
	- claw meat	1972	11	0.10	0.55	0.28			
	- tail meat	1972	11	0.28	0.72	0.48			

Element : Mercury
Medium : Sea organisms . Shellfish.
Unit : mg/kg WET matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
SHELLFISH									
Various species	Coastal waters of England and Wales :	1970-71					W.ox.FlAA	28 GB	g.b
	- Mid North Sea		34	0.04	0.63	0.22			
	- Southern North Sea		59	0.02	0.65	0.10			
	- English Channel		33	0.03	1.6	0.23			
	- Bristol Channel		45	0.02	0.52	0.12			
	- Irish Sea		73	0.02	2.5	0.32			
Various species, excluding crab	Coastal waters of England and Wales :	1972					W.ox.FlAA	69 GB	g.b
	- Southern North Sea		2	0.06	0.07	0.07			
	- English Channel		1			0.21			
	- Bristol Channel		9	0.06	0.58	0.17			
	- Irish Sea		4	0.06	0.60	0.22			

Element : Mercury

Medium : Sea organisms - Fish

Unit : mg/kg WET matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
FISH										
Serranidae										
Morone labrax (Bass)	French coastal areas Atl.	1971		0.09	0.23	0.16	FlAA	31	F	
	Med.	1971			0.54		FlAA	31	F	
Dicenthrarchus labrax (Bass)	Thames estuary	1972	3	0.42	1.8	0.81	W.ox.FlAA	69	GB	b
Sparidae										
Sparus auratus (Sea bream)	Belgian market	Nov.71-Nov.72	17	0.01	0.50	0.15	FlAA	18	B	
Pagellus centrodontus (Sea bream)	French coastal areas	1971		0.06	0.27	0.18	FlAA	31	F	
Cantharus lineatus Montagu (Sea bream)	French coastal areas	1971			0.07		FlAA	31	F	
Pagellus erythrinus (Pandora)	French coastal areas-Med.	1971			0.39		FlAA	31	F	
Boops boops (Bogue)	French coastal areas-Med.	1971			0.34		FlAA	31	F	
Mullidae										
Mullus surmuletus (Red mullet)	Belgian market	Nov.71toNov72	8	0.01	0.20	0.12	FlAA	18	B	
Scombridae										
Scomber scombrus (Mackerel)	Belgian market	Nov.71toNov72	5	0.02	0.40	0.19	FlAA	18	B	
	French coastal areas	1971		0.015	0.16	0.07	FlAA	31	F	
	The Netherlands	Oct.-Dec.70	4	0.22	0.59	0.34	NA	6.5	NL	
	North Sea	Jan.71-Jun.72	5	0.01	0.20	0.072	FlAA	11	F	
	Mid North Sea	1972	10	0.06	0.66	0.28	W.ox.FlAA	69	GB	b

Element : Mercury
Medium : Sea organisms - Fish
Unit : mg/kg WET matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
FISH										
Scombridae										
Scomber scombrus (Mackerel)	Atl.French Coast	Jan.71-Jun.72	2	0.04	0.05	0.045	FlAA	1	F	
	Med.French coast	Jan.71-Jun.72	2	0.31	0.34	0.325	FlAA	1	F	
Tuna, without specification of species	Mediterr.Sea ?	5 Apr.71-2 Dec.71	4527	0.05	>1.5	0.43		3	I	
	Mediterr.Sea ?	10 Dec.71-20 Oct.72	677	0.05	1.75	0.35		3	I	
Katsuwomus pelamis (Tuna Listao or Shipjack)	Mainly Atl.and Ind.Oceans	1971	113	0.05	0.70	0.21	Ac.D.FlAA	31	F	
Thunnus alalunga (White tuna)	South Atl. Reunion, Atl.French and Spanish coast.	1971	337	0.10	0.90	0.30	Ac.D.FlAA	31	F	e
	N.E.Atl.	June 71	6	0.03	0.18	0.108	FlAA	11	F	
Thunnus albacora (Tuna Yellowfin)	Atl. (Africa, Centr.Amer.) Pac.Ocean	1971	366	0.05	1.25	0.338	Ac.D.FlAA	31	F	e
	Imported in France	May 71	39	0.10	1.80	0.96	FlAA	11	F	
	Imported in France from Ind.Ocean	probl.1971	46	0.04	1.0	0.19	FlAA	11	F	
	Imported in France	1971	4	0.18	0.59	0.315	FlAA	11	F	
Thunnus Thynnus (Tuna Bluefin)	Biscay Bay	1971	285	0.20	0.80	0.485	Ac.D.FlAA	31	F	6
	Mediterr.	1971	132	0.50	2.50	1.145	Ac.D.FlAA	31	F	

Element : Mercury

Medium : Sea organisms - Fish

Unit : mg/kg WET matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks
FISH										
Scombridae										
Thunnus thynnus (Tuna Bluefin)	Mediterr.	March 72	4	0.73	0.82	0.765	FlAA	11	F	
	Belgian market	Nov.71-Nov.72	16	0.23	1.71	0.70	FlAA	18	B	
Thunnus obesus (Tuna Bigeye or Patudo)	Senegal,Côte d'Ivoire, Maroc ,Spain,Italy, Russia,Japan,Canada	1971	20	0.41	1.08		Ac.D.FlAA	31	F	
Xiphias gladus (Swordfish)	Mediterr.Sea ?	Dec.71-Oct.72	40	0.65	1.75	1.31		3	I	
Pleuronectidae										
Pleuronectes platessa (Plaice)	The Belts, Cattegat, Skagerrak, North Sea, South of Funen	1968-72	26	0.025	0.08	0.05	NA	23	DK	d
	Scotland	1971-72				0.06	W.ox.FlAA	28	GB	L
	England and Wales,distant waters	1971-72				0.06	W.ox.FlAA	28	GB	b
	England and Wales, Middle and coastal waters	1971-72				0.13	W.ox.FlAA	28	GB	g.b
	Irish Sea, Morecambe Bay	1971-72	51	0.10	1.4	0.58	W.ox.FlAA	28	GB	b
		1972	23	0.21	0.92	0.55	W.ox.FlAA	69	GB	b
		1972	34	0.07	0.84	0.34	W.ox.FlAA	32	B	e
	Mersey estuary (Irish Sea)	1971-72	7	0.26	0.64	0.40	W.ox.FlAA	28	GB	b

Element : Mercury
Medium : Sea organisms - Fish
Unit : mg/kg WET matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
FISH										
Pleuronectidae										
Pleuronectes platessa (Plaice)	Mersey estuary (Irish Sea)	1972	33	0.22	1.1	0.53	W.ox.FlAA	69	GB	b
	Bristol Channel	1972	21	0.06	0.42	0.20	W.ox.FlAA	32	B	e
	Mid North Sea	1972	71	0.06	0.58	0.19	W.ox.FlAA	69	GB	b
	Southern North Sea	1972	16	<0.02	0.13	0.04	W.ox.FlAA	69	GB	b
	North Sea. Belgian coastal area	1972	201	0.03	0.39	0.165	W.ox.FlAA	32	B	e
	North Sea, Dutch coastal area	Oct.-Dec.70	5	0.05	0.14	0.09	NA	6.5	NL	
	North Sea, Dutch coastal area	End.71	11	0.094	0.166	0.118	NA	36	NL	
	The Netherlands, Waddenzee	1969-70	8			0.21	NA	6.7	NL	a-Methyl-Hg as Hg : 0.12
	Thames Estuary	1970-71	27	0.09	0.60	0.37	W.ox.FlAA	28	GB	b
		1972	17	0.07	1.1	0.33	W.ox.FlAA	69	GB	b
	French coastal areas. Med.	1971			0.48		FlAA	31	F	
Scophthalmus rhombus (Brill)	Dutch coastal areas	End 1971	5	0.067	0.141	0.097	NA	36	NL	
Solea solea (Sole)	North Sea. Belgian coastal area	1972	13	0.21	0.48	0.36	W.ox.FlAA	32	B	
	Thames estuary	1972	7	0.13	0.42	0.24	W.ox.FlAA	69	GB	b
	Bristol Channel and other places	1972	10	0.04	0.38	0.16	W.ox.FlAA	32	B	

Element : Mercury

Medium : Sea organisms - Fish

Unit : mg/kg WET matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
FISH										
Pleuronectidae										
Solea solea (Sole)	Mersey estuary	1972	8	0.15	0.55	0.29	W.ox.FlAA	69	GB	b
	French coastal areas.Atl.			0.02	0.15	0.042	W.ox.FlAA	31	F	
	French coastal areas.Med.				0.42			31	F	
Microstomus kitt (Lemon sole)	Mersey estuary	1972	2			0.31	W.ox.FlAA	69	GB	b
Pleuronectes flesus (Flounder)	The Netherlands,Waddenzee	1969-70	5			0.50	NA	6.7	NL	a-Methyl-Hg as Hg 0.30
Platichthys flesus (Flounder)	Thames estuary	1970-71	83	0.08	2.5	0.74	W.ox.FlAA	28	GB	b
		1972	14	0.20	1.8	0.59	AA	69	GB	b
	Irish Sea,Morecambe Bay	1970-71	9	0.39	1.1	0.80	W.ox.FlAA	28	GB	b
		1972	16	0.54	1.3	0.77	W.ox.FlAA	69	GB	b
	Irish Sea,Mersey estuary	1972	28	0.13	1.2	0.64	W.ox.FlAA	69	GB	b
	Baltic,Cattegat, Isefjord, Roskildefjord ;the sea south of Funen	1968-72	32	0.01	0.08	0.05	NA	23	DK	h.l
	The sound	1968-72	10	0.12	0.9	0.4	NA	23	DK	h
	Aarhus Bay	1968-72	7	0.02	0.3	0.08	NA	23	DK	h
	Dutch coastal areas	End 1971	5	0.106	0.478	0.258	NA	36	NL	

Element : Mercury
Medium : Sea organisms - Fish
Unit : mg/kg WET matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
FISH										
Pleuronectidae										
Limanda limanda (Dab)	Dutch coastal areas	End 71	4	0.034	0.265	0.112	NA	36	NL	
	French coastal areas	1971		0.06	0.13	0.09	W.dig.FlAA	31	F	
	Thames estuary	1971-72	56	0.06	0.64	0.22	W.ox. FlAA	28	GB	b
		1972	2	0.11	0.53	0.32	W.ox. FlAA	69	GB	b
	Mersey estuary,Irish Sea)	1971-72	4	0.39	1.5	1.0	W.ox.FlAA	28	GB	b
		1972	16	0.40	1.1	0.82	W.ox.FlAA	69	GB	b
	Morecambe Bay,Irish Sea)	1971-72	8	0.73	1.3	1.1	W.ox.FlAA	28	GB	b
		1972	5	0.24	0.89	0.39	W.ox.FlAA	69	GB	b
Various species										
- Brill,Dab,Plaice,Sole,Turbot	Belgian market	Nov.71-Nov.72	71	< 0.01	0.89	0.14	FlAA	18	B	
- Megrim,Sole,Plaice,Flounder, Dab	North Sea	Jan.71-Jun.72	44	0.04	0.35	0.106	FlAA	11	F	
	French coastal areas -Atl.	Jan.71-Jun.72	3	0.05	0.07	0.058	FlAA	11	F	
	French coastal areas -Med.	Jan.71-Jun.72	4	0.03	0.08	0.06	FlAA	11	F	

Element : Mercury

Medium : Sea organisms - Fish

Unit : mg/kg WET matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
FISH										
Scorpaenidae and Triglidae										
Sebastes dactylopterus										
(Rockfish)	French coastal areas	1971		0.13	0.36	0.25	W.dig.FlAA	31	F	
Trigla cuculus, lucerna (gurnard)	French coastal areas	1971		0.03	0.32	0.16	W.dig.FlAA	31	F	
Various species										
Scorpionfishes, gurnards, redfishes	North Atlantic, North Sea	Jan.71-Jun.72	20	0.03	0.32	0.154	FlAA	11	F	
	French coastal areas-Atl.	Jan.71-Jun.72	2	0.06	0.07	0.065	FlAA	11	F	
	French coastal areas-Med.	Jan.71-Jun.72	5	0.03	0.21	0.125	FlAA	11	F	
Lophidae										
Lophius piscatorius (Angler)	French coastal areas	1971		0.08	0.53	0.22	W.dig.FlAA	31	F	
	Belgian market	Nov.71-Nov.72	36	0.11	0.90	0.31	FlAA	18	B	
Gadidae										
Gadus morrhua (Cod)	Baltic, Belts, Cattegat, North Sea, sea South of Funen, Skagerrak, Isefjord	1968-72	40	0.04	0.22	0.12	NA	23	DK	d.e
	Imported in Italy	Dec.71-Oct.72	20			<0.1		3	I	
	Scotland	1971-72				0.06	W.ox.FlAA	28	GB	b
	Distant waters of UK	1971-72				0.07	W.ox.FlAA	28	GB	b
	Distant waters of UK (Iceland)	1972	6	0.01	0.03	0.02	W.ox. FlAA	69	GB	b

Element : Mercury
Medium : Sea organisms - Fish
Unit : mg/kg WET matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
FISH										
Gadidae										
Gadus morrhua (Cod)	England and Wales, middle distance and coastal waters	1970-71				0.13	W.ox.FlAA	28	GB	g.b
	Mid North Sea	1972	77	0.06	0.47	0.24	W.ox.FlAA	69	GB	b
	Thames estuary	1970-71	107	0.11	1.2	0.36	W.ox.FlAA	28	GB	b
		1972	11	0.14	0.43	0.33	W.ox.FlAA	69	GB	b
	Morecambe Bay(Irish Sea)	1970-71	11	0.37	0.62	0.47	W.ox.FlAA	28	GB	b
	Mersey estuary(Irish Sea)	1972	6	0.36	0.65	0.49	W.ox.FlAA	69	GB	b
	The Netherlands	Oct.-Dec.70	5	0.14	0.24	0.18	NA	6.5	NL	
	Belgian coastal area	1972	64	0.03	0.27	0.13	W.ox.FlAA	32	B	e
	French coastal areas	1971		0.05	0.20	0.076	W.Dig.FlAA	31	F	
Merluccius merluccius (Hake)	Imported in Italy	1971-72	80			<0.1		3	I	
	French coastal areas	1971		0.06	0.36	0.20	W.Dig.FlAA	31	F	
Merlangus merlangus (Whiting)	The Netherlands	Oct.-Dec.70	5	0.05	0.09	0.07	NA	6.5	NL	
	Belgian coastal area	1972	151	0.07	0.56	0.19	W.ox. FlAA	32	B	e
	Mid North Sea	1972	10	0.11	0.57	0.29	W.ox. FlAA	69	GB	b
	French coastal areas.Atl.	1971		0.03	0.12	0.07	W.Dig.FlAA	31	F	
	French coastal areas.Med.	1971			0.20		W.Dig.FlAA	31	F	

Element : Mercury

Medium : Sea organisms - Fish

Unit : mg/kg WET matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
FISH									
Gadidae									
Merlangus merlangus (Whiting)	Thames estuary	1970-71	39	0.15	0.83	0.45	W.ox. FLAA	28 GB	b
		1972	24	0.19	1.1	0.37	W.ox. FLAA	69 GB	b
	Morecambe Bay (Irish Sea)	1970-71	6	0.26	0.90	0.44	W.ox. FLAA	28 GB	b
		1972	8	0.31	1.3	0.8	W.ox. FLAA	69 GB	b
Melanogrammus aeglefinus	The Netherlands	Oct.-Dec.70	5	0.08	0.23	0.17	NA	6.5 NL	
(Haddock)	Scotland	1970-71				0.06	W.ox. FLAA	28 GB	b
	England and Wales, distant waters	1970-71				0.07	W.ox. FLAA	28 GB	b
Gadus luscus (Pout)	French coastal areas	1971			0.10		W.dig. FLAA	31 F	
Gadus capelanus RISSO (Poor cod)	French coastal areas. Med.	1971			0.84		W.dig. FLAA	31 F	
Pollachius virens (Saithe)	Distant waters of UK (Iceland)	1972	5	0.03	0.07	0.05	W.ox. FLAA	69 GB	b
Pollachius virens (Coalfish) and Pollachius pollachius (Pollack)	French coastal areas	1971		0.024	0.11	0.073	W.Dig. FLAA	31 F	
Molva molva (Ling)	French coastal areas	1971			0.55		W.Dig. FLAA	31 F	
Trisopterus luscus (Pout whiting)	Thames estuary	1972	7	0.23	0.36	0.31	W.ox. FLAA	69 GB	b
Various species :									
Cod, Haddock, Coley, Hake	Belgian market	Nov.71-Nov.72	52	0.03	0.49	0.14	FLAA	18 B	

Element : Mercury
Medium : Sea organisms -Fish
Unit : mg/kg WET matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
FISH										
Gadidae :										
Various species :										
Cod, Haddock, Hake, Whiting, Pollack, Coalfish, Ling, Pout, Poor cod	North Atl., North Sea, West of Ireland	Jan.71-Jun.72	96	0.01	0.46	0.096	FlAA	11	F	
	Atl.French coast	Jan.71-Jun.72	17	0.035	0.16	0.085	FlAA	11	F	
	Med.French coast	Jan.71-Jun.72	10	0.06	0.13	0.103	FlAA	11	F	
Percaesocae										
Belone belone (Garfish)	Belgian market	Nov.71-Nov.72	2	0.04	0.09		FlAA	18	B	
Ammodytes lancea	The Netherlands, Waddenzee	1969-70	8			0.17	NA	6.7	NL	a
Ammodytes sp. (Sand eel)	SouthernNorth Sea	1972	2			0.01	W.ox.FlAA	69	GB	b
Crenimugil labrosus (grey mullet)	Thames estuary	1972	7	0.10	2.2	1.2	W.ox.FlAA	69	GB	b
Anguillidae										
Anguilla anguilla (Eel)	Thames estuary	1972	7	0.69	2.2	1.1	W.ox.FlAA	69	GB	b
Congridae										
Conger conger (Conger eel)	French coastal areas.Atl.	1971		0.14	0.24	0.19	W.dig.FlAA	31	F	
	French coastal areas.Med.	1971			0.51		W.dig.FlAA	31	F	

Element : Mercury
Medium : Sea organisms - Fish
Unit : mg/kg WET matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
FISH										
Congridae										
Various species										
Congers and eels	French coastal areas.Atl.	Jan.71-Jun.72	3	0.09	0.27	0.15	FlAA	11	F	
	French coastal areas.Med.	Jan.71-Jun.72	2	0.16	0.17	0.165	FlAA	11	F	
Clupeidae										
Clupea harengus (Herring)	Baltic,Cattegat, Skagerrak North Sea	1968-72	16	0.022	0.045	0.033	NA	23	DK	d.e
	French coastal areas	1971		0.18	0.21	0.19	W.Dig.FlAA	31	F	
	Scotland	1970-71				0.04	W.ox. FlAA	28	GB	b
	England and Wales, Middle and coastal waters	1970-71				0.12	W.ox. FlAA	28	GB	b.c
	Thames estuary	1970-71	54	0.07	0.97	0.44	W.ox. FlAA	28	GB	b
		1972	10	0.14	0.44	0.27	W.ox. FlAA	69	GB	b
Sardina Pilchardus Walbaum (Sardine)	French coastal areas	1971		0.02	0.04	0.026	W.Dig.FlAA	31	F	
Sprattus sprattus (Sprat)	Belgian coastal areas	1972	47	0.04	0.29	0.15	W.ox. FlAA	32	B	
	Thames estuary	1970-71	3	0.14	0.34	0.25	W.ox. FlAA	28	GB	b

Element : Mercury
Medium : Sea organisms - Fish
Unit : mg/kg WET matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
FISH										
Clupeidae										
Various species										
Sardines, anchovy, sprat, herring	North Atlantic, North Sea	Jan.71-Jun.72	12	0.01	0.14	0.077	FlAA	11	F	
	French coastal areas.Atl.	Jan.71-Jun.72	14	0.015	0.08	0.055	FlAA	11	F	
	French coastal areas.Med.	Jan.71-Jun.72	14	0.07	0.235	0.146	FlAA	11	F	
Herring + sardines	Belgian market	Nov.71-Nov.72	12	0.01	0.15	0.05	FlAA	18	B	
Whitebait (Jong herrings and sprats)	The Netherlands, Waddenzee	1969-70	16			0.185	NA	6.7	NL	a. Methyl-Hg as Hg · 0.085
	The Netherlands, Waddenzee	1970	16			0.17	NA	6.7	NL	a.
Salmonidae										
Salmo salar (Salmon)	United Kingdom	1970-71	9	0.04	0.13	0.08	W.ox.FlAA	28	GB	b
	Belgian market	Nov.71-Nov.72	11	<0.01	0.09	0.03	FlAA	18	B	
	Canada, Pacific ocean coast (French market)	1971	223	0.006	0.15	0.05	W.dig.FlAA	31	F	
	Atl.ocean and Baltic	1968-72	10	0.07	0.14	0.10	NA	23	DK	

Element : Mercury

Medium : Sea organisms - Fish

Unit : mg/kg WET matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
FISH										
Rays										
Raja batis (Skate)	Thames estuary	1970-71	16	0.53	1.0	0.80	W.ox.FlAA	28	GB	b
Various species	Belgian market	Nov.71-Nov.72	8	0.09	0.40	0.21	FlAA	18	B	
	French coastal areas	1971		0.08	1.40	0.70	W.Dig.FlAA	31	F	
Squalidae										
Squalus acanthias (Dogfish)	French coastal areas	1971		0.07	0.64	0.21	W.Dig.FlAA	31	F	
Lamna cornubica (Porbeagle)	French coastal areas	1971		0.16	1.80	0.79	W.Dig.FlAA	31	F	
	Atl.Ocean,French zone	1971	103	0.10	2.20	0.687	W.Dig.FlAA	31	F	e
	New Foundland,North Sea, Feroe Islands	1968-72	26	0.65	3.2	1.3	NA	23	DK	d.e
Galeidae										
Galeus canis (Tope)	French coastal areas	1971		0.26	0.40	0.33	W.Dig.FlAA	31	F	
Mustelidae										
Mustelus laevis RISSO (Smooth hound)	French coastal areas	1971		0.15	0.44	0.30	W.Dig.FlAA	31	F	
Scyliorhinus caniculus (Lesser spotted dogfish)	French coastal areas	1971		0.30	0.37	0.33	W.Dig.FlAA	31	F	
	Mid North Sea	1972	10	0.11	0.69	0.25	W.ox. FlAA	69	GB	b
	Thames estuary	1972	3	0.55	2.4	1.5	W.ox. FlAA	69	GB	b

Element : Mercury
Medium : Sea organisms - Fish
Unit : mg/kg WET matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
FISH										
Elasmobranchs										
Various species										
Rays, Smooth hound, lesser spotted dogfish)	North Atlantic	Jan.71-Jun.72	4	0.24	0.49	0.365	FlAA	11	F	
	French coastal areas-Atl.	Jan.71-Jun.72	8	0.02	0.23	0.125	FlAA	11	F	
	French coastal areas-Med.	Jan.71-Jun.72	8	0.12	0.96	0.433	FlAA	11	F	

Element : Mercury

Medium : Sea organisms - Fish

Unit : mg/kg WET matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
FISH										
Various species	North Sea	1971-72	325		<0.5		AA	55	D	
	North Sea	1971-72	45		>0.5		AA	55	D	
	Distant waters of UK (Greenland, Iceland, Norway coast, Barents Sea)	1971-72	148	0.01	0.30	0.06	W.ox.FlAA	28	GB	b
	Middle distance waters (Mid and Southern North Sea)	1971-72	156	0.03	0.38	0.11	W.ox.FlAA	28	GB	b
Sea bream, picarel, goatfish, horse mackerel, mullet, weever	Atl. French coast, English Channel	Jan.-Jun.72	10	0.02	0.12	0.07	FlAA	11	F	
	Med. French coast	Jan.-Jun.72	27	0.04	1.05	0.33	FlAA	11	F	

Element : Mercury
Medium : Sea organisms - Fish
Unit : mg/kg WET matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
FISH										
Various species	Coastal waters around England and Wales :									g
	- Eastern coast(North Sea)	1970-71	235	0.01	0.48	0.13	W.ox.FlAA	28	GB	b
		1972	240	0.02	0.54	0.12	W.ox.FlAA	69	GB	b
	- Thames estuary	1970-71	394	0.06	2.5	0.45	W.ox.FlAA	28	GB	b
		1972	112	0.07	2.2	0.50	W.ox.FlAA	69	GB	b
	- Strait of Dover and English Channel to Portland Bill	1970-71	161	0.02	1.4	0.32	W.ox.FlAA	28	GB	b
		1972	27	0.04	0.68	0.23	W.ox.FlAA	69	GB	b
	- Cornwail and Devon (to Hertland Point)	1970-71	460	0.01	1.2	0.176	W.ox.FlAA	28	GB	b
		1972	188	0.02	0.90	0.174	W.ox.FlAA	69	GB	b
	- Bristol Channel	1970-71	163	0.03	1.2	0.23	W.ox.FlAA	28	GB	b
		1972	179	0.02	0.76	0.17	W.ox.FlAA	69	GB	b
	- Irish Sea									
	- eastern coast	1970-71	267	0.05	2.4	0.51	W.ox.FlAA	28	GB	b
		1972	277	0.03	1.5	0.45	W.ox.FlAA	69	GB	b
	- other parts	1970-71	308	<0.01	0.91	0.23	W.ox.FlAA	28	GB	b
	- Total of the samples	1970-71	1988	<0.01	2.5	0.29	W.ox.FlAA	28	GB	b
		1972	1023	0.02	1.5	0.27	W.ox.FlAA	69	GB	b

Element : Mercury

Hg.6.23

Medium : Sea organisms - Organs (liver) of sea organisms

Unit : mg/kg WET matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
Liver of sea organisms										
FISH :										
- Cod and haddock		1969-70	7	0.021	0.15	0.051	NA	6.6	NL	
- Cod liver oil		1971-72	5		<0.005		AA	28	GB	
BIRDS :										
-Somateria mollissima (Eider)		1969-70	7	6.9	14.1	10.4	NA	6.7	NL	h
-Sterna sandvicencis		1969-70	5	2.4	10.0	4.4	NA	6.7	NL	j
MAMMELS :										
Seals - 1st.category : Jong seals		1969-70	7	0.45	6.4	3.98	NA	6.7	NL	k
- 2d category : 2 jongs, 1 adult		1969-70	3	18	36	27.3	NA	6.7	NL	k
- 3d. category : 4 adults (females)		1969-70	4	225	765	405	NA	6.7	NL	k

Element : Mercury
Medium : Sea organisms
Unit : mg/kg WET matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.

Remarks :

a- The Waddenzee receives a part of the water of the Rhine
b- On edible portion of the sample as received
c- Bulked samples of varying number of individuals
d- Region of very low or negligible pollution by Hg
e- Relation between weight or age and concentration of Hg
f- No relation between weight and concentration of Hg
g- Coastal = within 40 km from the coast, except in the case of the Irish Sea all of which is included
h- All of them found dead
j- One of them found dead
k- All of them found dead or ill

Element : Mercury
Medium : Drinking water
Unit : µg/ℓ

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
	Surface waters									
Lindau	Bodensee	Jun.-Dec.72	5	0.01	0.08	0.04	FℓAA	45	D	
Koblenz		1972-73	5		<0.1		AA	48	D	
Düsseldorf	Rhine	1971-72	24	<0.05	1.4	0.2	AA	46	D	
Rotterdam-Honingerdijk	Rhine	Mar.72	1			<0.1		4	NL	
Andijk	Ijsselmeer	Mar.72	1			<0.1		4	NL	
	Dam of Esch/Sûre	1972	3		<0.03		AA	9	L	Purified
	14 big drinking water reservoirs of F.R.G.	1971-72	90	<0.03	0.06	<0.03	AA	47	D	
	Groundwaters									
Grindstedt(Danemark)		1972	1			0.12	NA	22	DK	
München	Various groundwaters	Apr.71	8	0.02	0.08	0.04	FℓAA	45	D	
Mainz	19 groundwaters	1971-73	47	0.009	1.9	0.22	AA	51	D	
Mainz	Mainwater	1971-73	24	0.003	13.5	0.84	AA	51	D	
Haarlem	Dunes	Mar.1972	1			<0.1		4	NL	
Castricum(The Netherlands)	Dunes recharged with Rhine water	Mar.1972	1			<0.1		4	Nℓ	
Amsterdam Leiduin	Dunes recharged with Rhine water	Mar.1972	1			<0.1		4	NL	
Den Haag	Dunes recharged with Rhine water	Mar.1972	1			<0.1		4	NL	

Element : Mercury
Medium : Food- Beverages
Unit : mg/kg material as presented (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
BEVERAGES									
Soft drinks	United Kingdom	1970-71	2			0	W.ox.FlAA	28a GB	
Beer and cider	United Kingdom	1970-71	3	0.01	0.02	0.01	W.ox.FlAA	28a GB	

[redacted]

Element : Mercury

Medium : Food- Fish and fish products

Unit : mg/kg material as presented (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Method	Ref.		Remarks.
FISH AND FISH PRODUCTS										
Fresh										
Fresh American clams	United Kingdom	1970-71	4	0.05	0.06	0.06	W.ox.FlAA	28	GB	
Frozen prawns	United Kingdom	1970-71	2	0.03	0.04	0.04	W.ox.FlAA	28	GB	
White fish	United Kingdom	1970-71	31	0	0.3	0.07	W.ox.FlAA	28a	GB	
Fatty fish	United Kingdom	1970-71	8	0	0.1	0.02	W.ox.FlAA	28a	GB	
Canned fish										
Prawns	United Kingdom	1970-71	7	0.01	0.12	0.04	W.ox.FlAA	28	GB	
Shrimps	United Kingdom	1970-71	7	0.0	0.04	0.02	W.ox.FlAA	28	GB	
Dressed crab	Ireland	1971-72	8	0.04	0.06	0.05	Col.or.AA	1	Eir	
Crab	United Kingdom	1972	11	0.05	0.17	0.10	W.ox.FlAA	69	GB	
Lobster	United Kingdom	1972	6	0.05	0.29	0.12	W.ox.FlAA	69	GB	
Scombridae										
Mackerel	United Kingdom	1971-72	3	0.03	0.04	0.03	W.ox.FlAA	69	GB	
	Belgium	Nov.71-Nov.72	8	0.03	0.06	0.05	FlAA	18	B	
	The Netherlands	1970 ?	7	0.053	0.082	0.067	NA	6.6	NL	
(fillets)	Made in France	1972	2	0.015	0.02	0.017	FlAA	11	F	
Swordfish, dried	F.R.G.	1971-73	1			0.093	NA	59	D	

Element : Mercury
Medium : Food- Fish and fish products
Unit : mg/kg material as presented (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
FISH AND FISH PRODUCTS										
Canned fish										
Scombridae										
Tuna	United Kingdom	1970-71	6	0.12	0.3	0.18	W.ox.FlAA	28	GB	
Tuna	United Kingdom	1970-71	287	0	0.9	0.19	W.ox.FlAA	28a	GB	
Tuna - Skipjack	United Kingdom	1972	18	0.08	0.25	0.19	W.ox.FlAA	69	GB	%Hg as Methyl Hg : ~90
- Bonito	United Kingdom	1972	4	0.02	0.19	0.07	W.ox.FlAA	69	GB	
- Other	United Kingdom	1972	3	0.29	0.60	0.44	W.ox.FlAA	69	GB	%Hg as Methyl Hg : ~89
Tuna -Thunnus Thynnus	Belgium	Nov.71-Nov.72	24	0.02	2.46	0.32	FlAA	18	B	
Tuna, 5 different brands	Luxemburg	Nov.72-Jan.73	5	0.11	0.26	0.2	A.dig.Col	12	L	
Tuna	The Netherlands	1970 ?	16	0.032	1.0	0.39	NA	6.6	NL	
Tuna	Ireland	Jan.-Fev.71	40	0.07	0.83	0.23	Col.or.AA	1	Eir	
		1971-Jun.72	20	0.07	0.30	0.14	Col.or.AA	1	Eir	

Element : Mercury
Medium : Food- Fish and fish products
Unit : mg/kg material as presented (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
FISH AND FISH PRODUCTS										
Canned fish										
Scombridae										
Tuna	F.R.G. (different laboratories)	1971-72	420	0.01	4.10	0.43	AA	55	D	b
			11		<0.01		AA	55	D	b
			17		<0.10		AA	55	D	b
			35		<0.20		AA	55	D	b
			204	0.11	0.50		AA	55	D	b
			227	0.51	1.1		AA	55	D	b
		1971-73	13	0.076	1.64	0.366	NA	59	D	
Tuna	Imported in France from Senegal, Yvory Coast, Marocco, Japan, Russia , Spain, Italy, Canada	1971	436	<0.1	1.40	0.253	A.dig.FlAA	31	F	
Tuna -Neothonnus albacora (Yellowfin)	Imported in France from Japan, Senegal, Spain or made in France	1971-72	33	0.07	0.36	0.20	FlAA	11	F	
	Imported from Italy	1971-72	5	0.492	0.821	0.617	FlAA	11	F	
Tuna- germo alalunga	Made in France	1972	2	0.08	0.12	0.10	FlAA	11	F	

Element : Mercury
Medium : Food- Fish and fish products
Unit : mg/kg material as presented (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
FISH AND FISH PRODUCTS , canned fish										
Gadidae										
Cod roes, soft	United Kingdom	1970-71	1			0.01	W.ox.FlAA	28	GB	
Cod roes	Ireland	1971-72	4		0.02		Col.or.AA	1	Eir	
Cod liver oil	F.R.G.	1971-73	2	0.004	0.007	0.006	NA	59	D	
Cod liver oil	United Kingdom	1970-71	5		<0.005		W.ox.FlAA	28	GB	
Percesoceae										
Fillets of anchovied garfish in olive oil	Ireland	1971-72	8	0.02	0.05	0.04	Col.or.AA	1	Eir	
Clupeidae										
Herring	Ireland	1971-72	9	0.02	0.09	0.05	Col.or.AA	1	Eir	
Herring in various sauces	F.R.G.	1971-73	9	0.023	0.066	0.041	NA	59	D	
Herring	Belgian market	Nov.71-Nov.72	19	0.01	0.13	0.05	FlAA	18	B	
	The Netherlands	1970 ?	7	0.033	0.060	0.047	NA	6.6	NL	
Herrings in tomato	United Kingdom	1970-71	5	0.01	0.03	0.02	W.ox.FlAA	28	GB	
Herrings in oil	United Kingdom	1970-71	1			0.02	W.ox.FlAA	28	GB	
Herrings in mushroom sauce	United Kingdom	1970-71	1			0.02	W.ox.FlAA	28	GB	

Element : Mercury

Medium : Food - Fish and fish products

Unit : mg/kg material as presented (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
FISH AND FISH PRODUCTS , canned fish										
Clupeidae										
Sardines, 3 different brands	Luxemburg	Nov.72-Jan.73	3	0.05	0.065	0.057	A.dig.Col	12	L	
Sardines	The Netherlands	1970 ?	7	0.0045	0.25	0.056	NA	6.6	NL	
Sardines	Belgium	Nov.71-Nov.72	19	<0.01	0.16	0.03	FlAA	18	B	
Sardines in oil	Made in France	1971	1			0.01	FlAA	11	F	
Sardines in oil	Ireland	1971-72	21	0.02	0.10	0.04	Col.or.AA	1	Eir	
Sardines in sauce	Ireland	1971-72	5	0.02	0.03	0.02	Col.or.AA	1	Eir	
Sardines in oil	United Kingdom	1970-71	7	<0.005	0.04	0.02	W.ox.FlAA	28	GB	
Sardines in tomato sauce	United Kingdom	1970-71	1			0.01	W.ox.FlAA	28	GB	
Pilchards	United Kingdom	1970-71	2	0.03	0.04	0.03	W.ox.FlAA	28	GB	
Pilchards in tomato sauce	United Kingdom	1970-71	2			<0.005	W.ox.FlAA	28	GB	
Pilchards in sauce	Ireland	1971-72	3		<0.02		Col.or.AA	1	Eir	
Pilchards	The Netherlands	1970 ?	6	0.0037	0.015	0.0089	NA	6.6	NL	
Sild in tomato sauce	United Kingdom	1970-71	1			0.01	W.ox.FlAA	28	GB	
Brislings in tomato sauce	United Kingdom	1970-71	2			0.01	W.ox.FlAA	28	GB	
Canned sild in soja oil	Ireland	1971-72	3	0.01	0.06	0.03	Col.or.AA	1	Eir	
Anchovies	Ireland	1971-72	1			0.04	Col.or.AA	1	Eir	
Anchovies	Belgium	Nov.71-Nov.72	11	0.05	0.36	0.17	FlAA	18	B	

Element : Mercury
Medium : Food- Fish and fish products
Unit : mg/kg material as presented (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
FISH AND FISH PRODUCTS, canned fish										
Salmonidae										
Salmon	United Kingdom	1970-71	100	0.0	0.5	0.08	W.ox.FlAA	28a	GB	
Salmon	Belgium	Nov.71-Nov.72	12	<0.01	0.12	0.03	FlAA	18	B	
Salmon	Imported in France from Japan, Russia, USA, Canada	1971	99		0.10	0.03	A.dig.FlAA	31	F	
Salmon	Ireland	Jan.-Fev.71	12	0.07	0.23	0.11	Col.or.AA	1	Eir	
		1971-Jun.72	52	0.01	0.07	0.02	Col.or.AA	1	Eir	
Salmon	The Netherlands	1970 ?	7	0.017	0.039	0.029	NA	6.6	NL	
Salmon, red	United Kingdom	1970-71	6	0.02	0.04	0.03	W.ox.FlAA	28	GB	
Salmon, med.red	United Kingdom	1970-71	8	0.01	0.03	0.02	W.ox.FlAA	28	GB	
Salmon, pink	United Kingdom	1970-71	1			0.01	W.ox.FlAA	28	GB	
Salmon, sockeye	United Kingdom	1970-71	2	0.03	0.05	0.04	W.ox.FlAA	28	GB	
Miscellaneous										
Tuna salmon	Ireland	1971-72	3	0.06	0.09	0.07	Col.or.AA	1	Eir	
Shellfish and crustacea (fresh and canned)	United Kingdom	1970-71	114	0	0.35	0.07	W.ox.FlAA	28a	GB	
Other canned fish	United Kingdom	1970-71	93	0	0.27	0.07	W.ox.FlAA	28a	GB	
Composite fish component of the UK diet	United Kingdom	1971-72	71	0.02	0.38	0.08	W.ox.FlAA	28,69	GB	

Element : Mercury

Medium : Food- Milk and milk products

Unit : mg/kg material as presented (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	M	Ref.		Remarks.
MILK AND MILK PRODUCTS										
Liquid milk	United Kingdom	1970-71	3	0	0.2	0.1	W.ox.FlAA	28a	GB	
	F.R.G.	1971-72	13	0.001	0.01	0.005	AA	55	D	b
Milkpowder	F.R.G.	1971-72	20	0.003	0.044	0.013	NA	55	D	
National dried milk	United Kingdom	1970-71	7	<0.005	0.005	<0.005	W.ox.FlAA	28	GB	
Milk powder	F.R.G.	1971-73	3	0.001	0.003	0.002	NA	59	D	
Butter	F.R.G.	1971-73	3	0.001	0.006	0.003	NA	59	D	
	United Kingdom	1970-71	1			0.01	W.ox.FlAA	28a	GB	
Cream	United Kingdom	1970-71	1			0	W.ox.FlAA	28a	GB	
Cheese	United Kingdom	1970-71	17		<0.005	<0.005	W.ox.FlAA	28	GB	
	F.R.G.	1971-73	3	0.005	0.012	0.009	NA	59	D	
Natural cheese	United Kingdom	1970-71	5	0	0.5	0.17	W.ox.FlAA	28a	GB	
Other milk products	United Kingdom	1970-71	5	0	0.04	0.01	W.ox.FlAA	28a	GB	
Composite milk component of the UK diet	United Kingdom,17 towns	1970-72	55		<0.005	<0.005	W.ox.FlAA	28,69	GB	

Element : Mercury
Medium : Food- Meat and meat products
Unit : mg/kg material as presented (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
MEAT AND MEAT PRODUCTS										
Beef										
Meat	United Kingdom	1970-71	24	<0.005	0.005	<0.005	W.ox.FlAA	2	GB	
	F.R.G.	1971-73	3	0.002	0.005	0.003	NA	59	D	
Beef,M.longi.dorsi	Bavaria,F.R.G.	1970-71	23	0.002	0.011	0.004	NA	60	D	
Veal,M.longi.dorsi	Bavaria,F.R.G.	1970-71	22	0.001	0.010	0.002	NA	60	D	
Beef and veal	United Kingdom	1970-71	7	0	0.02	0.01	W.ox.FlAA	28a	GB	
Corned beef	United Kingdom	1970-71	1			0	W.ox.FlAA	28a	GB	
Beef sausages (uncooked)	United Kingdom	1970-71	2	0.02	0.06	0.04	W.ox.FlAA	28a	GB	
Beef kidney	The Netherlands	1972	113	<0.01	0.20		W.ox.FlAA	40	NL	Med. n = 0.01
	F.R.G.	1971-73	3	0.013	0.017	0.015	NA	59	D	
Beef,liver	F.R.G.	1971-73	5	0.003	0.010	0.006	NA	59	D	
	United Kingdom	1970-71	24	<0.005	0.03	<0.008	W.ox.FlAA	28	GB	
Pork										
Pork	United Kingdom	1970-71	6	0	0.5	0.02	W.ox.FlAA	28a	GB	
Pork meat	F.R.G.	1971-73	4	0.006	0.010	0.008	NA	59	D	
Pork,M.longi.dorsi	F.R.G.	1970-71	60	0.003	0.110	0.042	NA	60	D	
Pork,kidney	F.R.G.	1971-73	4	0.016	0.149	0.066	NA	59	D	
	The Netherlands	1972	119	<0.01	1.29		W.ox.FlAA	40	D	Median = 0.01
	United Kingdom	1970-71	11	0.01	0.07	0.04	W.ox.FlAA	28	GB	
		1972	8	0.02	0.18	0.05	W.ox.FlAA	69	GB	

Element : Mercury

Medium : Food- Meat and meat products

Unit : mg/kg material as presented (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
MEAT AND MEAT PRODUCTS										
Pork										
Pork, liver	F.R.G.	1971-73	5	0.006	0.125	0.036	NA	59	D	
	Denmark	1967-68	62	0.002	0.347	0.019	NA	22	DK	
	United Kingdom	1970-71	11	0.005	0.04	0.02	W.ox.FlAA	28	GB	
	United Kingdom	1972	8	0.01	0.06	0.03	W.ox.FlAA	69	GB	
Bacon	United Kingdom	1970-71	2		<0.005	<0.005	W.ox.FlAA	28	GB	
Ham	United Kingdom	1970-71	4	<0.005	0.005	<0.005	W.ox.FlAA	28	GB	
Bacon and ham (uncooked)	United Kingdom	1970-71	2	0.01	0.05	0.03	W.ox.FlAA	28a	GB	
Bacon and ham (canned)	United Kingdom	1970-71	1			0.02	W.ox.FlAA	28a	GB	
Pork sausages(uncooked)	United Kingdom	1970-71	5	0	0.07	0.02	W.ox.FlAA	28a	GB	
Lard and compound cooking fat	United Kingdom	1970-71	2	0.02	0.26	0.14	W.ox.FlAA	28a	GB	
Mutton										
Mutton and lamb	United Kingdom	1970-71	2			0	W.ox.FlAA	28a	GB	
Chicken										
Meat	United Kingdom	1970-71	24	<0.005	0.005	<0.005	W.ox.FlAA	28	GB	
	F.R.G.	1971-73	3	0.002	0.009	0.005	NA	59	D	
Liver	F.R.G.	1971-73	2	0.008	0.013	0.010	NA	59	D	
	The Netherlands	1972	49	<0.01	0.02		W.ox.FlAA	40	NL	Median =0.01
	F.R.G.	1971-72	52	0	0.05		AA	55	D	b

Element : Mercury
Medium : Food - Meat and meat products
Unit : mg/kg material as presented (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
MEAT AND MEAT PRODUCTS										
Chicken										
Eggs	United Kingdom	1970-71	22	<0.005	0.02	<0.008	W.ox.FlAA	28	GB	Bulks of 6 eggs
	United Kingdom	1970-71	6			0	W.ox.FlAA	28a	GB	
	Denmark	1967-68	247	0.002	0.316	0.018	NA	22	DK	Bulks of 6 eggs
	F.R.G.	1971-72	17	0.002	0.06	0.009		55	D	b
	F.R.G.	1971-72	148		<0.1			55	D	b
Egg powder	F.R.G.	1971-73	1			0.014	NA	59	D	
Partridge, meat	F.R.G.	1971-73	2	0.006	0.019	0.013	NA	59	D	
Pheasant, meat	F.R.G.	1971-73	4	0.006	0.071	0.033	NA	59	D	
		1971-72	12	0.002	0.02	0.011	AA	55	D	b
Miscellaneous										
Meat, muscle	F.R.G.	1971-72	54	0.001	0.32	0.013	AA	55	D	b
	F.R.G.	1971-72	36			0.004	AA	55	D	
Liver	United Kingdom	1970-71	2	0	0.09	0.04	W.ox.FlAA	28a	GB	
Other offals	United Kingdom	1970-71	3	0	0.03	0.01	W.ox.FlAA	28a	GB	
Organs (kidney, liver, brain)	F.R.G.	1971-72	53	0.004	1.1	0.108	AA	55	D	b
	F.R.G.	1971-72	116	0	0.02		AA	55	D	
	F.R.G.	1971-72	21	0.021	0.05		AA	55	D	
Canned meat	United Kingdom	1970-71	8	0	0.01	0	W.ox.FlAA	28a	GB	

Element : Mercury

Medium : Food -Meat and meat products

Unit : mg/kg material as presented (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
MEAT AND MEAT PRODUCTS									
Miscellaneous									
Meat products	United Kingdom	1970-71	7	0	0.06	0.02	W.ox.FlAA	28a GB	
Suet and dripping	United Kingdom	1970-71	1			0	W.ox.FlAA	28a GB	
Composite meat and fish component of the UK diet	United Kingdom,17 towns	1970-72	55	<0.005	0.03		W.ox.FlAA	28,69 GB	

Element : Mercury

Medium : Food- Cereals and cereal products

Unit : mg/kg material as presented (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
CEREALS AND CEREAL PRODUCTS										
Wheat, unground	F.R.G.	1971-73	8	0.002	0.028	0.007	NA	59	D	
	F.R.G., Home grown	1971	2000	0.001	0.02			55	D	b
	F.R.G.	1971-72	50	0.001	0.016	0.002	A.dig.FlAA	58	D	c
Wheat, ground	F.R.G.	1971-73	8	0.002	0.004	0.003	NA	59	D	
Rye, unground	F.R.G.	1971-72	18	0.001	0.007	0.002	A.dig.FlAA	58	D	
	F.R.G.	1971-73	2	0.006	0.006	0.006	NA	59	D	
Rye, ground	F.R.G.	1971-73	2	0.001	0.002	0.002	NA	59	D	
Barley, unground	F.R.G.	1971-73	3	0.002	0.003	0.003	NA	59	D	
Oats, unground	F.R.G.	1971-73	2	0.003	0.004	0.003	NA	59	D	
Oats, ground	F.R.G.	1971-73	3	0.005	0.014	0.008	NA	59	D	
Maize, unground	F.R.G.	1971-73	3	0.009	0.018	0.014	NA	59	D	
Rice, unground	F.R.G.	1971-73	4	0.003	0.006	0.004	NA	59	D	
Rice	United Kingdom	1970-71	11	<0.003	0.01	<0.005	W.ox.FlAA	28	GB	

Element : Mercury

Medium : Food- Cereals and cereal products

Unit : mg/kg material as presented (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
CEREALS AND CEREAL PRODUCTS										
Miscellaneous										
Flour	United Kingdom	1970-71	19	<0.005	0.01	<0.007	W.ox.FlAA	28	GB	
Flour	United Kingdom	1970-71	8	0	0.06	0.02	W.ox.FlAA	28a	GB	
White bread	United Kingdom	1970-71	7	0	0.08	0.02	W.ox.FlAA	28a	GB	
White bread	F.R.G.	1971-73	4	0.010	0.018	0.015	NA	59	D	
Wholemeal and wheatmeal bread	United Kingdom	1970-71	1			0	W.ox.FlAA	28a	GB	
Wholemeal bread	F.R.G.	1971-73	5	0.004	0.054	0.026	NA	59	D	
Other bread	United Kingdom	1970-71	2	0.05	0.16	0.1	W.ox.FlAA	28a	GB	
Oatmeal and oat products	United Kingdom	1970-71	3	0.02	0.03	0.03	W.ox.FlAA	28a	GB	
Breakfast cereals	United Kingdom	1970-71	1			0.21	W.ox.FlAA	28a	GB	
	United Kingdom	1970-71	3	<0.005	0.005	<0.005	W.ox.FlAA	28	GB	
Other cereal foods	United Kingdom	1970-71	1			0	W.ox.FlAA	28a	GB	
Cereal products	F.R.G.	1971	18	0.003	0.025	0.009		55	D	b
Composite cereals component of the UK diet	United Kingdom, 17 towns	1970-72	56	<0.005	0.03		W.ox.FlAA	28,69	GB	

Element : Mercury
Medium : Food -Vegetables
Unit : mg/kg material as presented (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
VEGETABLES										
Brussels sprouts	United Kingdom	1970-71	25	0.001	0.007	0.003	W.ox.FlAA	28	GB	
	United Kingdom	1970-71	3			0	W.ox.FlAA	28a	GB	
Cabbage	United Kingdom	1970-71	3			0	W.ox.FlAA	28a	GB	
	F.R.G.	1971-73	3	0.001	0.006	0.004	NA	59	D	
Cabbages, broccoli and kale	United Kingdom	1970-71	21	0.001	0.009	0.004	W.ox.FlAA	28	GB	
Carrots	United Kingdom	1970-71	7	0.003	0.004	0.003	W.ox.FlAA	28	GB	
	United Kingdom	1970-71	3	0.01	0.05	0.03	W.ox.FlAA	28a	GB	
	F.R.G.			0.0003	0.005			55	D	b
Cauliflower	United Kingdom	1970-71	3	0	0.05	0.02	W.ox.FlAA	28a	GB	
Celery	Belgium	1973				0.012	W.ox.FlAA	32	B	
Chicory Witloof	Belgium	1973				0.002	W.ox.FlAA	32	B	
Leeks	Belgium	1973				0.004	W.ox.FlAA	32	B	
Mushrooms	United Kingdom	1970-71	1			0	W.ox.FlAA	28a	GB	
Onions	Belgium	1973	2			<0.001	W.ox.FlAA	32	B	
Onions, shallots and leeks	United Kingdom	1970-71	3	0	0.01	0	W.ox.FlAA	28a	GB	
Potatoes	United Kingdom	1970-71	23	0.001	0.004	0.001	W.ox.FlAA	28	GB	
	F.R.G.	1971-73	5	0.001	0.007	0.004	NA	59	D	
Potatoes(old)	United Kingdom	1970-71	4	0	0.07	0.02	W.ox.FlAA	28a	GB	
Peas (canned)	United Kingdom	1970-71	1			0.02	W.ox.FlAA	28a	GB	
Scorzonera	Belgium	1973				0.005	W.ox.FlAA	32	B	

Element : Mercury

Medium : Food - Vegetables

Unit : mg/kg material as presented (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
VEGETABLES										
Tomato	F.R.G.	1971-73	2	0.005	0.005	0.005	NA	59	D	
Canned tomatoes, tomato juices and purees	United Kingdom	1970-71	18	0.002	0.006	0.002	W.ox.FlAA	28a	GB	
Tomatoes (fresh)	United Kingdom	1970-71	14	0	0.05	0.01	W.ox.FlAA	28a	GB	
Tomatoes (canned)	United Kingdom	1970-71	11	0	0.06	0.02	W.ox.FlAA	28a	GB	
Tomatoes	United Kingdom, imported	1970-71	13	0.002	0.007	0.004	W.ox.FlAA	28	GB	
Turnips and swedes	United Kingdom	1970-71	2			0	W.ox.FlAA	28a	GB	
Leafy salads	United Kingdom	1970-71	6	0	0.05	0.01	W.ox.FlAA	28a	GB	
Other green vegetables	United Kingdom	1970-71	3	0.03	0.1	0.06	W.ox.FlAA	28a	GB	
Vegetables	F.R.G.		5			<0.01		55	D	b
Composite vegetables component of the UK diet										
- Root vegetables	United Kingdom, 17 towns	1970-72	56	<0.005	0.04		W.ox.FlAA	28,69	GB	
- Green vegetables	United Kingdom, 17 towns	1970-72	56	<0.005	0.03		W.ox.FlAA	28,69	GB	

Element : Mercury
Medium : Food - Fruit
Unit : mg/kg material as presented(a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
FRUIT										
Apples	United Kingdom	1970-71	9	0.002	0.003	0.002	W.ox.FlAA	28	GB	
	United Kingdom	1970-71	42	0	0.18	0.01	W.ox.FlAA	28a	GB	
	F.R.G.	1971-73	3	0.002	0.012	0.006	NA	59	D	
Grapes	United Kingdom	1970-71	1			0	W.ox.FlAA	28a	GB	
	F.R.G.	1971-73	1			0.009	NA	59	D	
Fig (dried)	F.R.G.	1971-73	2	0.003	0.011	0.007	NA	59	D	
Pears	United Kingdom	1970-71	12	0	0.02	0	W.ox.FlAA	28a	GB	
	F.R.G.	1971-73	3	0.004	0.004	0.004	NA	59	D	
Other soft fruit	United Kingdom	1970-71	1			0	W.ox.FlAA	28a	GB	
Other fresh fruit	United Kingdom	1970-71	1			0.01	W.ox.FlAA	28a	GB	
Canned fruit	United Kingdom	1970-71	1			0.01	W.ox.FlAA	28a	GB	
Dried fruit	United Kingdom	1970-71	2	0	0.08	0.04	W.ox.FlAA	28a	GB	
Fruit	F.R.G.	1972	5	0.001	0.01			55	D	b
Nut and nut products	United Kingdom	1970-71	1			0	W.ox.FlAA	28a	GB	
Composite fruits and preserves component of the UK diet	United Kingdom,17 towns	1970-72	56	<0.005	0.02		W.ox.FlAA	28,69	GB	

Element : Mercury

Medium : Food- Prepared foods, miscellaneous

Unit : mg/kg material as presented (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
PREPARED FOODS										
Baby foods	F.R.G.	1971-73	8	0.002	0.024	0.011	NA	59	D	
	United Kingdom	1970-71	1			0.02	W.ox.FlAA	28a	GB	
Canned soup	United Kingdom	1970-71	1			0	W.ox.FlAA	28a	GB	
Pickles and souces	United Kingdom	1970-71	3	0	0.02	0.01	W.ox.FlAA	28a	GB	1 sample :1.4
Meat and vegetable extract	United Kingdom	1970-71	2			0	W.ox.FlAA	28a	GB	
Jams, jellies and fruit curds	United Kingdom	1970-71	1			0	W.ox.FlAA	28a	GB	
MISCELLANEOUS										
Tea	United Kingdom	1970-71	1			0	W.ox.FlAA	28a	GB	
Coffee-bean and ground	United Kingdom	1970-71	1			0.06	W.ox.FlAA	28a	GB	
Cocoa and drinking chocolate	United Kingdom	1970-71	1			0.06	W.ox.FlAA	28a	GB	
Salt	United Kingdom	1970-71	1			0	W.ox.FlAA	28a	GB	
Kitchen salt, 2 brands	The Netherlands	1969-71	2	<0.0003	0.002		AA	35	NL	
Mineral salt, 2 brands	The Netherlands	1969-71	2	36	48		AA	35	NL	
Sea salt, 2 brands	The Netherlands	1969-71	2	6	6.5		AA	35	NL	
Herbs and spices	United Kingdom	1970-71	6	0	0.18	0.09	W.ox.FlAA	28a	GB	
Sugar	United Kingdom	1970-71	19	<0.004	<0.005	<0.004	W.ox.FlAA	28	GB	
	United Kingdom	1970-71	1			0.02	W.ox.FlAA	28a	GB	
Syrup, treacle and honey	United Kingdom	1970-71	1			0	W.ox.FlAA	28a	GB	

Element : Mercury
Medium : Food - Miscellaneous
Unit : mg/kg material as presented(a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
MISCELLANEOUS (continuation)										
Sugar	F.R.G.	1971-73	2	0.0003	0.001	0.0007	NA	59	D	
Margarine	F.R.G.	1971-73	3	0.001	0.008	0.005	NA	59	D	
Composite fats component of the UK diet	United Kingdom,17 towns	1970-72	56	<0.005	0.01		W.ox.FlAA	28,69	GB	

Element : Mercury

Medium : Food -Total diet, animal feeds

Unit : mg/kg material as presented (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
TOTAL DIET									
Total diet samples weighted mean, 8 quarters	United Kingdom, 6 to 8 towns (depending on quarter)	1970-72				<0.01	W.ox.FlAA	28,69 GB	d
ANIMAL FEEDS									
Animal feeds	United Kingdom	1970-71					W.ox.FlAA	28 GB	See reference for details
- 71 different samples			71	<0.01	0.29	0.07			
- Meat and bone meal			21	0.01	4.0	0.37			
- 1 commercial brand			2	0.75	1.8	1.3			

Remarks :

a- Analysis made - on material as sold in shop (Ref.1)
- on edible portion of the sample as received (Ref.28 and 69)
- on wet matter (Ref.6.6, 7,11,12,18,22,31,40,59,60)
- on fresh material (32)

b- Analysis probably made on material as presented, according to the results.

c- Statistical selection of 2500 samples

d- Weighted according to the proportions of the different food groups consumed

Element : Mercury
Medium : Air
Unit :

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks
Particulate matter									
United Kingdom, 7 sampling places	1971-72		<0.00005	0.00024	0.00012	NA	43	GB	µg/kg air
Federal Republic Germany :									
- München, residential area	Jun. 1972	2	0.0002	0.0004		FlAA	45	D	µg/m³
- München, 6 sampling places, monthly samples.	1971	51	0.02	16.6	1.61	NA	56	D	µg/g particulates
Rain (+ fallout)									
United Kingdom, 1 sampling place (pure area-)	1971				<0.2	NA	43	GB	µg/l

Element : Mercury
Medium : Miscellaneous
Unit : mg/kg WET matter

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
PLANTS								
Grass of meadows (The Netherlands):								
- n°1 : on the winter bed of the Rhine	Jun.1970	3	120	200	160	NA	6.3 NL	
- n°2 : outside the dikes	Jun.1970	3	37	46	41	NA	6.3 NL	
ORGANS OF ANIMALS								
Liver								
Cows having grazed the whole summer on meadows n°1 above	1970	5	1.6	4.6	3.1	NA	6.3 NL	
Cows having grazed on meadows n°2 above	1970	2	2.4	3.5	3.0	NA	6.3 NL	
Wild rabbits from meadows n°1 above	1970				42	NA	6.3 NL	
Birds of prey found dead during the winter	1968-69	18	0.672	47.8	9.33	NA	6.8 NL	
	1969-70	29	0.317	15.6	2.46	NA	6.8 NL	Methyl-Hg as Hg 68 to 128%
Kidneys								
Birds of prey , found dead or dying	Nov.68-Mar.69	6	68	125	92	NA	33 NL	a.b
		9	0.65	25	7.8	NA	33 NL	a

Element : Mercury
Medium : Miscellaneous
Unit : mg/kg WET matter

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
ORGANS OF MAN (United Kingdom)	1971-72					W.ox.FlAA	28 GB	
Heavy consumers of fish of certain coastal regions - Whole blood		6	0.01	0.03	0.016			
- Hair		6	1.2	3.9	2.4			
Heavy consumer of canned tuna								
- Whole blood		1			0.015			
- Hair		1			2.4			
Control subjects- Whole blood		6	<0.005	0.005	<0.005			
- Hair		6	0.8	8.4	2.9			

Remarks :

a- Hg content of liver and kidney of the same order

b- Supposed poisoning with Hg -compound.

Mo.1 - River water
Mo.3 - River sediments
Mo.4 - Sea sediments
Mo.7 - Drinking water
Mo.8 - Food

MOLYBDENUM

[redacted]

Element : Molybdenum

Medium : River water

Unit : µg/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Danube								
- 2 places (Leipheim, Bad Abbach)	Aug.71-Nov.72	24		0.5		FA	45 D	a
Weser								
- Bremen	1971-72	21	0.2	6.5	1.8	Col	46 D	
Rhine								
- Bodensee -Lindau	Aug.71-Nov.72	12		0.5		FA	45 D	b
-Depth 0m	1971-73	19	<0.1	0.5	<0.2	Col	51 D	
-Depth 40m	1971-73	19	<0.1	0.4	<0.2	Col	51 D	
-Depth 60m	1971-73	19	<0.1	0.4	<0.4	Col	51 D	
-Depth 80m	1971-73	19	<0.1	0.7	<0.7	Col	51 D	
- Mannheim, km 434	1971-73	20	0.1	0.9	0.6	Col	51 D	
- Mainz, km 498.5	1971-73	16	0.1	1.5	0.8	Col	51 D	
- Wiesbaden, km 506	1971-73	28	0.1	3.2	0.9	Col	51 D	
- Bimmen	1971-72	20	0.3	13.8	2.5	Col	46 D	
- Düsseldorf	1971-72	20	0.2	16.0	2.6	Col	46 D	
- Tributaries :								
- Zürichsee	1971-73	3			<0.1	Col	51 D	
- Main, Ottendorf , km 345	1971-73	16	0.1	0.7	0.4	Col	51 D	
Garstadt , km 325	1971-73	15	0.1	0.46	0.3	Col	51 D	
Kostheim, km 0.5	1971-73	10	0.1	2.1	1.4	Col	51 D	

Remarks : a- Continuous sampling for a monthly sample . b- Daily samples composited into a monthly sample.

Element : Molybdenum

Medium : River sediments

Unit : mg/kg

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Conway (Wales)	1969	143	<2	2	<2		26 GB	a
- Conway(Wales), estuary	1969	5	<2	5	2		26 GB	a
- Tributaries from mineralized area (West, former mining activity)	1969	14	<2	30	10		26 GB	a
- Tributaries from unmineralized area(East)	1969	153	<2	50	<2		26 GB	a

Remarks :

a- On 80-mesh fraction .

Element : Molybdenum
Medium : Sea sediments
Unit : mg/kg

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Irish Sea								
- Conway Bay, offshore	1969	3			<2		26 GB	On 80-mesh fraction

Element : Molybdenum
Medium : Drinking water
Unit : µg/ℓ

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Me		Ref.		Remarks.
	Surface waters										
Lindau	Bodensee(40m)	Jun.-Dec.72	2		n.d		A	Col	45	D	a
Düsseldorf	Rhine	1971-72	20	0.01	2.0	0.2		Col	46	D	
	Groundwaters										
Mainz	19 groundwaters	1971-73	47	<0.1	0.98	<0.6		Col	51	D	
Mainz	Main water	1971-73	19	<0.1	0.39	<0.2		Col	51	D	

Remarks :
a- Daily samples composited into a monthly sample .

Element : Molybdenum

Medium : Food

Unit : mg/kg WET matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
MEAT									
Pork,M.longi.dorsi	Bavaria, F.R.G.	1970-71	59	0.002	0.022	0.011	NA	60 D	
Beef,M.longi.dorsi	Bavaria, F.R.G.	1970-71	22	0.003	0.087	0.041	NA	60 D	
Veal,M.longi.dorsi	Bavaria, F.R.G.	1970-71	19	0.015	0.043	0.025	NA	60 D	

Ni.1 (1-4) - River water
Ni.2 - Sea water
Ni.3 (1-2) - River sediments
Ni.4 - Sea sediments
Ni.5 - Fresh water organisms
Ni.6 - Sea organisms
Ni.7 - Drinking water
Ni.9 - Air
Ni.10 - Soil

NICKEL

Element : Nickel

Medium : River water

Unit : µg/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Danube								
- 2 places (Leipheim, Bad Abbach)	Aug.71-Nov.72	36	4.4	17	10	FA AA	45 D	a
- Tributary Altmühl	1969-71	25			10	Col or AA	50 D	
Havel-Spree , Berlin	1971-72	3	9.0	15.4	11.2	AA	46 D	
Weser								
- km 366.2 Bremen	Oct.71-Mar.72	6	13	17	15	AA	46,52 D	c
- Bremen	1971-72	24	9.2	26.0	16.2	AA	46 D	
Rhine								
- Bodensee- Lindau	Aug.71-Nov.72	18	3.0	7.0	5.0	FA AA	45 D	b
- Depth 0m	1971-73	22	7	21	19	AA	51 D	
- Depth 40m	1971-73	21	2	74	21	AA	51 D	
- Depth 60m	1971-73	22	2	62	21	AA	51 D	
- Depth 80m	1971-73	18	5	35	19	AA	51 D	
- Mannheim , km 434	1971-73	23	7	889	60	AA	51 D	
- Mainz km 498	1971-73	16	4	105	25	AA	51 D	
- Wiesbaden, km 506	1971-73	32	10	74	19	AA	51 D	
- Braubach , km 581	1971-72	11	14	76	25	AA	48 D	total
Braubach, km 581	1971-72	13	5	54	16	AA	48 D	dissolved
- Bimmen	1971-72	24	15.7	30.0	21.8	AA	46 D	
- Düsseldorf	1971-72	24	10.4	48.8	20.5	AA	46 D	

Element : Nickel

Medium : River water

Unit : µg/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Rhine								
- km 698			20	80	35	AA	54 D	d
- km 865			15	100	45	AA	54 D	d
- km 643-865		4	10	100	49	AA	54 D	
- Emmerich , km 865	1971-72	12	22	114	37	AA	48 D	total
Emmerich , km 865	1969-72	82	2	90	18	AA	48 D	total
- Tributaries :								
- Zürichsee	1971-73	3			9	AA	51 D	
- Main ,Ottendorf , km 345	1971-73	16	8	40	19	AA	51 D	
Garstadt, km 325	1971-73	15	16	34	22	AA	51 D	
Kostheim, km 0.5	1971-73	15	18	66	37	AA	51 D	
- Regnitz, 3 sampling places	1965-72	116			22	Col or AA	50 D	e
- Mosel, Koblenz, km 2	1971-72	11	12	89	25	AA	48 D	total
Mosel, Koblenz, km2	1971-72	13	4	69	17	AA	48 D	dissolved
- Sûre , Dam of Esch/Sûre , 4 sampling places	1972	11		<3		AA	9 L	
- Sieg (mouth)		4	25	30	28	AA	54 D	
- Wupper (mouth)		4	40	140	110	AA	54 D	

Element : Nickel

Medium : River water

Unit : µg/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.		Ref.		Remarks
Rhine										
- Tributaries :										
- Erft (mouth)		4	30	50	40		AA	54	D	
- Ruhr , part a	1971-73	53	34	109	60	F		47	D	week average
part b	1971-73	53	25	143	80	F		47	D	week average
part c	1971-73	6	37	68	48	F		47	D	month averag
part d	1971-73	6	12	19	15	F		47	D	month averag
(mouth)		4	40	150	85		AA	54	D	
- Rheinberger - Altrhein		4	70	180	140		AA	54	D	
- Lippe (mouth)		4	40	88	60		AA	54	D	
Maas and affluents from French to Dutch frontiers	Sep.71-Dec.72	57	<5	85	13	AC	AA	15	B	
- River Maas in Grave	1970-71	12	5	14	9			5	NL	
Scheldt and affluents from French to Dutch frontiers	Sep.71-Dec.72	13	5	47	16	AC	AA	15	B	
Yser and affluents from French frontier to the sea	Sep.71-Dec.72	14	<5	25	~5	AC	AA	15	B	
Other Belgian tributaries into the North Sea	Sep.71-Dec.72	11	<5	17	~6	AC	AA	15	B	

Element : Nickel

Medium : River water

Unit : µg/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.		Ref.		Remarks
Conway (Wales)										
- above tidal influence	1969	8	0.3	8.0	3.4	I.ex	AA	26	GB	
- below tidal influence	1969	16	0.6	9.2	4.6	I.ex	AA	26	GB	
- Tributaries from mineralized area (West, former mining activity)	1969	12	0.03	9.8	2.3	I.ex	AA	26	GB	
- Tributaries from unmineralized area (East)	1969	22	0.3	7.9	2.6	I.ex	AA	26	GB	
Dwyryd (Wales)	Sep.70-Oct.71				3.5	I.ex	Pol	25	GB	
- Welsh " clean" water	Sep.70-Oct.71				0.5	I.ex	Pol	25	GB	
Miscellaneous										
- Running water Region Wiesbaden, 33 sampling places	1971-73	184	<1	42	5		AA	51	D	

Remarks :

a- Continuous sampling for a monthly sample
b- Daily samples composited into a monthly sample
c- 3 times a week-samples composited into a monthly sample .
d- Composited weekly samples
e- Tributary of Main.

Element : Nickel
Medium : Sea water
Unit : µg/l

Identification of samples	Period	n	Xmin	Xmax	$\overline{X}$	Meth.		Ref.		Remarks
West of Scotland, Atlantic Ocean	1970	5	0.29	0.66	0.43	FE	AA	27	GB	a.b
West of Scotland, coastal area	1970	8	0.36	0.79	0.53	FE	AA	27	GB	a.b
Irish Sea :										
- Western part , offshore	1969-70	26	0.22	1.2	0.45	FE	AA	27	GB	a.b
- Eastern part , offshore	1969-70	43	0.30	22.9	0.70	FE	AA	27	GB	a.b
- Western part, shoreline	1970	9	0.9	3.1	1.4	FE	AA	27	GB	a.b
- Eastern part, shoreline	1970	11	1.3	9.8	2.6	FE	AA	27	GB	a.b
- Conway Bay (Wales)	1969				3.7	I.ex	AA	26	GB	c
English Channel, coastal area of UK	1969-70	8	0.22	1.3	0.54	FE	AA	27	GB	a.b
North Sea :										
- coastal area of UK	1969-71	44	0.16	5.4	0.83	FE	AA	42	GB	a
- Belgian shoreline, 12 sampling places	1971-72	48		<5		ACE	AA	15	B	

Remarks :

a- $\overline{X}$ = geometric mean

b- Percentage of total nickel in filtered water : 50

c- Dominant source of pollution : runoff from mineralized areas (former mining activity)

Element : Nickel

Medium : River sediments

Unit : mg/kg

Ni.3.1

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.		Ref.		Remarks
Danube	Winter 71-72		96	165	125		AA	44	D	a
Elbe	Winter 71-72		110	137	126		AA	44	D	a
- Elbe, Hamburg harbour	Feb.73	12	12	166		A.dig	AA	53	D	b
Weser	Winter 71-72		72	148	98		AA	44	D	a
Ems	Winter 71-72		77	123	104		AA	44	D	a
Rhine	Winter 71-72		50	416	164		AA	44	D	a
- Tributaries :										
- Neckar	Winter 71-72		83	236	190		AA	44	D	a
- Main	Winter 71-72		77	266	128		AA	44	D	a
- Dam of Esch/Sûre	Jun.-Sep.72	8	34	80	56		AA?	9	L	b.c
- Ruhr	1965-72	19	62	510	235			47	D	b ?
Maas										
- from French frontier to above Liège	Sep.71-Dec.72	17	22	44	31		UV	15	B	b
- from Liège to Dutch frontier	Sep.71-Dec.72	8	45	110	68		UV	15	B	b
- Tributaries	Sep.71-Dec.72	21	14	98	52		UV	15	B	b
Scheldt and affluents from French frontier to above Ghent	Sep.71-Dec.72	6	12	37	25		UV	15	B	b

Element : Nickel
Medium : River sediments
Unit : mg/kg

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks
Yser and affluents from French frontier to the sea	Sep.71-Dec.72	14	11	40	20	UV	15	B	b
Other Belgian tributaries into the North Sea	Sep.71-Dec.72	6	18	43	29	UV	15	B	b
Conway (Wales)	1969	143	50	85	54		26	GB	d
- Conway(Wales), estuary	1969	5	30	60	48		26	GB	d
- Tributaries from mineralized area (West, former mining activity)	1969	14	40	300	82		26	GB	d
- Tributaries from unmineralized area (East)	1969	153	20	160	55		26	GB	d

Remarks :

a- On clay fraction < 2 µm . Sedimentair clay as comparison :68

b- On dry matter

c- 2 sampling places + sediments on the filters of the water purification plant

d- On 80-mesh fraction.

Element : Nickel

Medium : Sea sediments

Unit : mg/kg

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
North Sea								
- Belgian shoreline, 11 sampling places	1971-72	43	0.4	27	12	UV	15 B	On dry matter
Irish Sea								
- Conway Bay, offshore	1969	3	20	30	27		26 GB	On 80-mesh fraction

Element : Nickel

Medium : Fresh water organisms

Unit : mg /kg DRY matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
WATERPLANTS									
Macrophytes	Dam of Esch/Sûre	Jun.-Sep.72	2	<5	6			9 L	
FISH									
Various species	Dam of Esch/Sûre	Jun.-Sep.72	2	7	7	7		9 L	
	Ruhr	1965-72	16	<5	24	13		47 D	

[redacted]

Element : Nickel

Medium : Sea organisms

Unit : mg/kg DRY matter (a)

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	I h.	Ref.	Remarks
SEAWEEDS									
Fucus vesiculosus	Coastal areas :								
	- West of Scotland	1970	7	1.8	8.4	4.1	W.ox. AA	27 GB	b.c
	- Irish Sea , West	1970	7	2.9	8.5	4.3	W.ox. AA	27 GB	b.c
	- Irish Sea, East	1970	13	5.0	9.8	6.7	W.ox. AA	27 GB	b.c
	- English Channel	1970	7	3.4	18.0	5.5	W.ox. AA	27 GB	b.c
	- North Sea	1970	6	2.9	10.9	6.0	W.ox. AA	27 GB	b.c
Porphyra umbilicalis (Laverweed)	Shoreline of Irish Sea								
	- West	1970	9	0.2	9.6	2.2	W.ox. AA	27 GB	b
	- East	1970	13	0.6	9.7	2.0	W.ox. AA	27 GB	b
MOLLUSCS									
Ostrea edulis (oyster)	Galway Bay , Ireland	May 72-Mar.73	12		<0.1			1 Eir	On wet matter
Patella vulgata (Limpet)	Shoreline of Irish Sea								
	- West	1970	9	3.1	24	7.3	W.ox. AA	27 GB	b
	- East	1970	8	4.5	9.9	7.0	W.ox. AA	27 GB	b

Remarks :

a- Unless otherwise specified

b- $\bar{X}$ = geometric mean

c- No significant difference with Fucus sampled in 1961 at the same places.

Element : Nickel
Medium : Drinking water
Unit : µg/l

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
	Surface waters								
Lindau	Bodensee (40m)	Jun.-Dec.72	7	2.0	5.8	4.5	A AA	45 D	a
Düsseldorf	Rhine	1971-72	23	0.5	18.4	8.5	AA	46 D	
	Dam of Esch/Sûre	1972	3		<3		AA?	9 L	b
	Groundwaters								
Mainz	19 groundwaters	1971-73	44	1	67	15	AA	51 D	
Mainz	Main water	1971-73	22	1.5	41	13	AA	51 D	
Wiesbaden	5 Deep galleries	1971-73	39	<1	8	<3	AA	51 D	
Wiesbaden	5 Surface galleries	1971-73	7	2	5	4	AA	51 D	
Wiesbaden	6 Leak galleries	1971-73	11	<1	5	<4	AA	51 D	

Remarks :
a- Daily samples composited into a monthly sample .
b- Purified.

Element : Nickel

Medium : Air

Unit :

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
<u>Particulate matter</u>								
United Kingdom, 7 sampling places	1971-72		0.001	0.054	0.011	X	43 GB	µg/kg air
Federal Republic Germany :								
- München ,residential area	Jun.1972	2	n.d	0.010		W.dig.	45 D	µg/m³
<u>Rain</u> (+ fallout)								
United Kingdom ,1 sampling place (pure area)	1971				6	X	43 GB	µg/ℓ

Element : Nickel

Medium : Soil

Unit : mg/kg

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
Loess formation, in a forest, 5 layers to 1 m depth	Belgium, Meerdael	1964	5	25	40	32	UV	32 B	
Loess formation , in a semi-industrial region, 6 layers to 1.2 m depth	Belgium, Halle	1964	6	21	49	32	UV	32 B	
Sandy soil under pines, 3 layers to 0.2 -0.28 m depth	Belgium, Bokrijk	1970	6	1.2	1.6	1.33	UV	32 B	
Sandy soil, cultivated	Belgium, Bredene	1968	2	44	45	45	UV	32 B	
Garden soil with humus	Belgium, Meisse	1968	5	52	66	58	UV	32 B	

Se.1 (1-3) - River water
Se.5 - Fresh water organisms
Se.7 - Drinking water
Se.8 - Food
Se.9 - Air

SELENIUM

[redacted]

Element : Selenium

Medium : River water

Unit : µg/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Danube								
- 2 places (Leipheim, Bad Abbach)	Aug.71-Nov.72	36	0.6	8.1	2.35	FA	45 D	a
- above Ulm	Aug.71	1			0.13	NA	65 D	
- Tributaries :								
- Illerkanal	Aug.71	1			0.22	NA	65 D	
- Lech, above Augburg	Aug.71	2		<0.1		NA	65 D	
- Lechkanal	Aug.71	4			1.35	NA	65 D	
Weser								
- Bremen	1971-72	21	1.3	12.0	4.6	Col	46 D	
Rhine								
- Bodensee- Lindau	Aug.71-Nov.72	18	0.4	4.3	1.2	FA	45 D	b
- Depth 0m	1971-73	21	<0.1	1.4	<0.6	Col	51 D	
- Depth 40m	1971-73	21	<0.1	1.8	<0.7	Col	51 D	
- Depth 60m	1971-73	21	<0.1	5.3	<0.7	Col	51 D	
- Depth 80m	1971-73	17	<0.1	1.9	<0.7	Col	51 D	
- Mannheim, km 434	1971-73	22	<0.1	5.5	<4.1	Col	51 D	
- Mainz , km 498.5	1971-73	16	2.2	26	8.7	Col	51 D	
- Wiesbaden, km 506	1971-73	31	0.8	10.2	4.5	Col	51 D	

Element : Selenium

Medium : River water

Unit : µg/l

Se.1.2

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks
Rhine									
- Braubach , km 581	1972	2	7	8	8	Col	48	D	total
Braubach , km 581	1972	2	4	8	6	Col	48	D	dissolved
- Bimmen	1971-72	23	1.6	20.0	5.1	Col	46	D	
- Düsseldorf	1971-72	23	1.1	6.8	4.0	Col	46	D	
- Emmerich , km 865	1972	4	8	11	9	Col	48	D	total
Emmerich, km 865	1972	5	3	7	4	Col	48	D	dissolved
- Tributaries :									
- Zürichsee	1971-73	3			<0.1	Col	51	D	
- Main, Ottendorf , km 345	1971-73	16	<0.1	4.2	<1.9	Col	51	D	
Garstadt, km 325	1971-73	15	<0.1	5.5	<1.4	Col	51	D	
Kostheim , km 0.5	1971-73	13	0.5	4.5		Col	51	D	
- Mosel, Koblenz, km 2	1972	2	4	12	8	Col	48	D	total
Mosel, Koblenz, km2	1972	2	3	4	3	Col	48	D	dissolved

Element : Selenium

Medium : River water

Unit : µg/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Rhine								
- Tributaries :								
- Ruhr , part a	1971-73	53	< 1	3	2	F	47 D	week averages
part b	1971-73	53	< 1	2	1	F	47 D	week averages
part c	1971-73	6	< 1	1	< 1	F	47 D	month averages
part d	1971-73	6	< 1	1	< 1	F	47 D	month averages

Remarks :

a- Continuous sampling for a monthly sample.

b- Daily samples composited into a monthly sample.

Element : Selenium

Medium : Fresh water organisms

Unit : mg/kg DRY matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
WATERPLANTS									
Fontinalis antipiretica	Danube (Ulm), Lech (Augsburg)	Aug.-Sep.71	3	0.7	16.4	6.2	NA	65 D	
Ranunculus fluitans	Lechkanal, Illerkanal	Aug.-Sep.71	4	0.5	1.3	0.7	NA	65 D	
Cladophora ssp.	Wertach	Sep.71	1			1.5	NA	65 D	
Various species	Alz, Alzkanal	May 71	4	0.7	4.6	2.0	NA	65 D	

Element : Selenium

Medium : Drinking water

Unit : µg/l

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
	Surface waters								
Lindau	Bodensee (40m)	Jun.-Dec.72	5	0.5	4.9	0.7	A Col	45 D	a
Düsseldorf	Rhine	1971-72	18	1.0	6.0	2.4	Col	46 D	
	Groundwaters								
Mainz	19 groundwaters	1971-73	47	<0.1	2.0	<0.9	Col	51 D	
Mainz	Main water	1971-73	25	<0.1	3.1	<1	Col	51 D	

Remarks :

a- Daily samples composited into a monthly sample .

Element : Selenium

Medium : Food

Unit : mg/kg WET matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks
MEAT										
Pork,M.longi.dorsi	Bavaria,F.R.G.	1970-71	58	0.018	3.10	0.34	NA	60	D	
Beef,M.longi.dorsi	Bavaria,F.R.G.	1970-71	24	0.017	1.24	0.36	NA	60	D	
Veal,M.longi.dorsi	Bavaria,F.R.G.	1970-71	17	0.011	0.69	0.17	NA	60	D	

Element : Selenium

Medium : Air

Unit :

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Particulate matter								
Federal Republic Germany :								
- München ,6 sampling places, monthly samples	1971	53	0.3	20	5.1	NA	56 D	µg/gparticulates

Ag.1 - River water
Ag.2 - Sea water
Ag.6 - Sea organisms

SILVER

[redacted]

Element : Silver

Medium : River water

Unit : µg/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Weser,								
- km 366.2 Bremen	Oct.71-Mar.72	6	1	8	3		52 D	

Element : Silver

Medium : Sea water

Unit : µg/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Irish Sea :								
- Western part, shoreline	1970	9	0.02	0.24	0.08	FE AA	27 GB	a.b
- Eastern part, shoreline	1970	11	0.03	0.16	0.04	FE AA	27 GB	a.b

Remarks :

a- $\bar{X}$ = geometric mean

b- Percentage of total silver in filtered water : 31 to 53

Element : Silver
Medium : Sea organisms
Unit : mg/kg DRY matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
SEAWEEDS									
Fucus vesiculosus	Coastal areas :								
	- West of Scotland	1970	7	0.11	0.58	0.20	W.ox. AA	27 GB	a.b
	- Irish Sea, West	1970	7	0.13	0.47	0.24	W.ox. AA	27 GB	a.b
	- Irish Sea, East	1970	13	0.07	0.79	0.30	W.ox. AA	27 GB	a.b
	- English Channel	1970	7	0.13	0.56	0.29	W.ox. AA	27 GB	a.b
	- North Sea	1970	6	0.13	0.66	0.35	W.ox. AA	27 GB	a.b
Porphyra umbilicalis (Laverweed)	Shoreline of Irish Sea :								
	- West	1970	6	0.01	0.30	0.13	W.ox. AA	27 GB	a
	- East	1970	8	0.01	0.21	0.09	W.ox. AA	27 GB	a
MOLLUSCS									
Patella vulgata (Limpet)	Shoreline of Irish Sea :								
	- West	1970	9	0.6	2.7	1.3	W.ox. AA	27 GB	a
	- East	1970	8	1.3	3.6	2.1	W.ox. AA	27 GB	a

Remarks :
a - $\bar{X}$ = geometric mean
b - No significant difference with Fucus sampled in 1961 at the same places .

[redacted]

Sr.1 - River water

STRONTIUM

Element : Strontium

Medium : River water

Unit : µg/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Rhine								
- km 643- 865		3	50	500	331	AA	54 D	
- Tributaries :								
- Sieg (mouth)		3	36	330	240	AA	54 D	
- Wupper (mputh)		3	80	200	140	AA	54 D	
- Erft (mouth)		3	240	250	248	AA	54 D	
- Ruhr (mouth)		3	130	180	150	AA	54 D	
- Rheinberger -Altrhein		3	780	8800	3570	AA	54 D	
- Lippe (mouth)		3	550	6600	3300	AA	54 D	

Sn.3 - River sediments
Sn.4 - Sea sediments
Sn.5 - Fresh water organisms
Sn.8 - Food
Sn.9 - Air
Sn.10- Soil

TIN

[redacted]

Element : Tin

Medium : River sediments

Unit : mg/kg

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Conway (Wales)	1969	143	<5	200	50		26 GB	a
- Conway (Wales), estuary	1969	5	<5	60	15		26 GB	a
- Tributaries from mineralized area (West, former mining activity)	1969	14	<5	40	15		26 GB	a
- Tributaries from unmineralized area (East)	1969	153	<5	300	17		26 GB	a

Remarks :

a- On 80-mesh fraction .

Element : Tin

Medium : Sea sediments

Unit : mg/kg

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Irish Sea								
- Conway Bay, offshore	1969	3	<5	5	<5		26 GB	On 80-mesh fraction

Element : Tin
Medium : Fresh water organisms
Unit : mg/kg DRY matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
WATERPLANTS									
Fontinalis antipiretica	Danube (Ulm), Lech (Augsburg)	Aug.-Sep.71	3	<5	36		NA	65 D	
Ranunculus fluitans	Illerkanal	Aug.71	2	26	37		NA	65 D	
Cladophora ssp.	Wertach	Sep.71	1			42.7	NA	65 D	
Various species	Alz,Alzkanal above chem.plants	May 71	2	13.3	14.5		NA	65 D	
	Alz, Alzkanal below chem.plants	May 71	2	2370	3070		NA	65 D	

Element : Tin

Medium : Food

Unit : mg/kg or ppm

Sn.8

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
MEAT										
Pork, M.longi.dorsi	Bavaria,F.R.G.	1970-71	53	0.05	9.10	1.09	NA	60	D	On WET matter
Beef, M.longi.dorsi	Bavaria,F.R.G.	1970-71	22	0.084	4.21	1.33	NA	60	D	On WET matter
Veal, M.longi.dorsi	Bavaria,F.R.G.	1970-71	18	0.15	1.80	0.67	NA	60	D	On WET matter
FRUIT										
Juice				130	160			50	D	
PREPARED MEALS										
Canned tomato soup	The Netherlands		6	16	102	44				On WET matter

Element : Tin

Medium : Air

Unit :

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Particulate matter								
Federal Republic Germany :								
- München, 6 sampling places, monthly samples	1971	42	34	4120	325	NA	56 D	µg/gparticulates

Element : Tin

Medium : Soil

Unit : mg/kg

Sn.10

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
Loess formation, in a semi-industrial region, 6 layers to 1.2 m depth	Belgium, Halle	1964	6	4.5	82.4	19.1	UV	32 B	
Sandy soil under pines, 3 layers to 0.2 - 0.28 m depth	Belgium, Bokrijk	1970	6	1.5	2.9	2.3	UV	32 B	
Sandy soil, cultivated	Belgium, Bredene	1968	2	5	5	5	UV	32 B	
Soil, 1.5 km from a metallurgical plant	Belgium	1965		30	90		UV	32 B	

Ti.3 - River sediments
Ti.4 - Sea sediments
Ti.10- Soil
Ti.11- Miscellaneous

Element : Titanum

Medium : River sediments

Unit : mg/kg

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Conway (Wales)	1969	143	2000	5000	4180		26 GB	a
- Conway (Wales), estuary	1969	5	850	6000	2810		26 GB	a
- Tributaries from mineralized area (West, former mining activity)	1969	14	1600	8500	5510		26 GB	a
- Tributaries from unmineralized area (East)	1969	153	1300	10000	2760		26 GB	a

Remarks :

a- On 80-mesh fraction .

Element : Titanum
Medium : Sea sediments
Unit : mg/kg

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Irish Sea								
- Conway Bay, offshore	1969	3	600	1600	1070		26 GB	On 80-mesh fraction

Element : Titane

Medium : Soil

Unit : mg/kg

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
Loess formation, in a forest, 5 layers to 1 m depth	Belgium, Meerdael	1964	5	4900	8500	7480	X	3.. B	
Loess formation, in a semi-industrial region, 6 layers to 1.2m depth	Belgium, Halle	1964	6	7700	10400	9100	X	32 B	

Element : Titane
Medium : Miscellaneous
Unit : mg/kg DRY matter

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
PLANTS								
Bredene, Belgium- Sandy soil, cultivated								
- Meadow grass	1968	1			n.d	X	32 B	
	1970	3	20	178	85	X	32 B	
Bokrijk, Belgium -Sandy soil.								
- Pine-needles	1970	5	15	40	28	X	32 B	
Vicinity of a metallurgical plant, Belgium								
- Pine-needles, spinach, rhubarb	1972	4	13	39	23	X	32 B	

V.1 - River water
V.3 - River sediments
V.4 - Sea sediments
V.7 - Drinking water
V.9 - Air
V.10- Soil

VANADIUM

[redacted]

Element : Vanadium

Medium : River water

Unit : ug/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Weser								
- Bremen	1971-72	22	0.2	70.0	7.9	Col	46 D	
Rhine								
- Bodensee- Depth 0m	1971-73	16	0.1	5.9	2.8	Col	51 D	
- Depth 40m	1971-73	17	0.1	5.5	3.2	Col	51 D	
- Depth 60m	1971-73	18	0.1	4.6	2.2	Col	51 D	
- Depth 80m	1971-73	15	<0.1	8.9	<2.5	Col	51 D	
- Mannheim, km 435	1971-73	19	0.9	11.6	6.4	Col	51 D	
- Mainz km 498.5	1971-73	15	0.6	13.7	7.3	Col	51 D	
- Wiesbaden, km 506	1971-73	84	0.3	14.4	3.1	Col	51 D	
- Bimmen	1971-72	23	1.0	26.0	7.2	Col	46 D	
- Düsseldorf	1971-72	24	<0.1	16.9	5.3	Col	46 D	
- Tributaries :								
- Zürichsee	1971-73	3			2.0	Col	51 D	
- Main , Ottendorf , km 345	1971-73	16	0.5	19.6	4.7	Col	51 D	
Garstadt, km 325	1971-73	14	0.2	9.4	6.7	Col	51 D	
Kostheim, km 0.5	1971-73	14	0.9	15.8	3.8	Col	51 D	

Element : Vanadium
Medium : River sediments
Unit : mg/kg

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Conway (Wales)	1969	143	85	160	110		26 GB	a
- Conway (Wales), estuary	1969	5	50	160	97		26 GB	a
- Tributaries from mineralized area (West, former mining activity)	1969	14	50	300	140		26 GB	a
- Tributaries from unmineralized area (East)	1969	153	40	400	145		26 GB	a

Remarks :
a- On 80-mesh fraction .

Element : Vanadium
Medium : Sea sediments
Unit : mg/kg

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Irish Sea								
- Conway Bay, offshore	1969	3	40	60	50		26 GB	On 80-mesh fraction

Element : Vanadium V.7

Medium : Drinking water

Unit : µg/l

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
	Surface waters								
Lindau	Bodensee (40m)	Jun.-Dec.72	5	n.d	1	<1	A Col	45 D	a
Düsseldorf	Rhine	1971-72	23	n.d	14?1	<1.7	Col	46 D	
	Groundwaters								
Mainz	19 groundwaters	1971-73	22	<0.1	5.5	<1.4	Col	51 D	
Mainz	Main water	1971-73	22	<0.1	7	<1.4	Col	51 D	

Remarks :

a- Daily samples composited into a monthly sample .

Element : Vanadium

Medium : Air

Unit :

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks
Particulate matter									
United Kingdom, 7 sampling places	1971-72		0.003	0.026	0.015	NA	43	GB	µg/kg air
Federal Republic Germany :									
- Frankfurt am Main, residential and office area near the city	Jan.-May 72	15	0.01	0.06	0.023	AA	63	D	µg/m³
Rain (+ fallout)									
United Kingdom, 1 sampling place (pure area)	1971				4.1	NA	43	GB	µg/l

Element : Vanadium

Medium : Soil

Unit : mg/kg

V.10

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Loess formation, in a forest, 5 layers to 1 m depth	Belgium, Meerdael	1964	5	44	66	58	UV	32 B	
Loess formation, in a semi-industrial region, 6 layers to 1.2 m depth	Belgium, Halle	1964	6	38	71	50	UV	32 B	
Sandy soil under pines, 3 layers to 0.2 -0.28 m depth	Belgium, Bokrijk	1980	6	2.4	4.9	3.5	UV	32 B	
Sandy soil, cultivated	Belgium, Bredene	1968	2	87	95	91	UV	32 B	
Garden soil with humus	Belgium, Meisse	1968	5	80	110	94	UV	32 B	

Element : Zinc

Medium : River water

Unit : µg/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.		Ref.		Remarks
Danube										
- 2 places (Leipheim, Bad Abbach)	Aug.71-Nov.72	36	20	120	58	FA	AA	45	D	a
- upstream Ulm	Fev.73	1			50		Po.	0	D	
- Tributary Altmühl	1969-71	25			51		Pol	50	D	
Havel-Spree , Berlin	1971-72	3	10.9	217	99		AA	46	D	
Weser										
- km 366.2 , Bremen	Oct.71-Mar.72	6	90	175	126		AA	46,52	D	c
- Bremen	1971-72	24	40	500	173		AA	46	D	
Rhine										
- Bodensee - Lindau	Aug.71-Nov.72	18	19	95	37	FA	AA	45	D	b
- Depth 0m	1971-73	22	4.5	246	21		AA	51	D	
- Depth 40m	1971-73	21	3.9	98	46		AA	51	D	
- Depth 60m	1971-73	22	4.9	79	22		AA	51	D	
- Depth 80m	1971-73	18	1.4	21	11		AA	51	D	
- Mannheim, km 434	1971-73	23	16	385	87		AA	51	D	
- Mainz km 498.5	1971-73	16	21	485	169		AA	51	D	
- Wiesbaden, km 506	1971-73	30	20	615	59		AA	51	D	
- Braubach, km 581	1971-72	19	76	431	174		AA	48	D	total
Braubach , km 581	1971-72	21	30	298	96		AA	48	D	dissolved

Zn.1 (1-5) - River water
Zn.2 (1-2) - Sea water
Zn.3 (1-2) - River sediments
Zn.4 - Sea sediments
Zn.5 - Fresh water organi s
Zn.6 (1-4) - Sea organisms
Zn.7 (1-2) - Drinking water
Zn.8 (1-2) - Food
Zn.9 - Air
Zn.10 - Soil
Zn.11 - Miscellaneous

ZINC

Element : Zinc

Medium : River water

Unit : µg/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks
Rhine									
- Bimmen	1971-72	24	212	608	357	AA	46	D	
- Düsseldorf	1971-72	24	44.5	369	187	AA	46	D	
- km 698			100	500	200	AA	54	D	d
- km 865			100	500	350	AA	54	D	d
- km 643-865		3	70	400	190	AA	54	D	
- Emmerich, km 865	1971-72	23	211	572	340	AA	48	D	total
Emmerich, km 865	1969-72	80	44	382	170	AA	48	D	dissolved
- Tributaries :									
- Zürichsee	1971-73	3			18	AA	51	D	
- Main, Ottendorf , km 345	1971-73	15	6.8	166	29	AA	51	D	
Garstadt, km 325	1971-73	15	17.2	294	29	AA	51	D	
Kostheim, km 0.5	1971-73	15	64.1	354	238	AA	51	D	
- Regnitz, 3 sampling places	1965-72	103			143	Col or AA	50	D	e
- Mosel , Koblenz , km 2	1971-72	11	9	369	127	AA	48	D	total
Mosel, Koblenz , km 2	1971-72	13	2	358	92	AA	48	D	dissolved
- Sûre ,Dam of Esch/Sûre 4 sampling places	1972	11	3	17	7.5	AA	9	L	

Element : Zinc

Medium : River water

Unit : µg/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Rhine								
- Tributaries :								
- Sieg (mouth)		4	80	200	140	AA	54 D	
- Wupper (mouth)		4	200	600	310	AA	54 D	
- Erft (mouth)		4	40	150	100	AA	54 D	
- Ruhr , part a	1971-73	53	6	260	117	F	47 D	week average
part b	1971-73	53	37	450	215	F	47 D	week average
part c	1971-73	6	60	122	93	F	47 D	month averag
part d	1971-73	6	35	117	72	F	47 D	month averag
(mouth)		4	110	160	140	AA	54 D	
- Rheinberger- Altrhein		4	170	400	290	AA	54 D	
- Lippe (mouth)		4	90	900	380	AA	54 D	
Maas								
- from French frontier to above Liège	Sep.71-Dec.72	12	90	176	133	AC GAA	15 B	
- from Liège to Dutch frontier	Sep.71-Dec.72	9	210	538	380	AC GAA	15 B	
- Tributaries (Belgium)								
- excepting Sambre and Vesdre	Sep.71-Dec.72	31	13	303	116	AC GAA	15 B	
- Sambre (industrial area)	Sep.71-Dec.72	30	100	1520	722	AF AA	14 B	
- Vesdre, Liège (industrial area)	Sep.71-Dec.72	2	513	1545	1029	AC GAA	15 B	

Element : Zinc
Medium : River water
Unit : µg/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.		Ref.		Remarks
Maas										
- Grave	1970-71	11	40	125	85			5	NL	
Scheldt, and affluents from French to Dutch frontiers	Sep.71-Dec.72	12	29	82	56	ACE	AA	15	B	
Yser and affluents from French frontier to the sea	Sep.71-Dec.72	14	56	132	75	ACE	AA	15	B	
Other Belgian tributaries into the North Sea	Sep.71-Dec.72	11	35	50	41	ACE	AA	15	B	
Conway (Wales)										
- above tidal influence	1969	8	0.8	94.8	33.4	I.ex	AA	26	GB	
- below tidal influence	1969	16	4.0	172	114	I.ex	AA	26	GB	
- Tributaries from mineralized area (West, former mining activity)	1969	12	94	3260	853	I.ex	AA	26	GB	
- Tributaries from unmineralized area (East)	1969	22	1.7	75	23.8	I.ex	AA	26	GB	
Rivers of Wales, mineralized area	Sep.70-Oct.71		14	438		I.ex	Pol	25	GB	
Welsh " clean" water					11	I.ex	Pol	25	GB	

Element : Zinc

Medium : River water

Unit : µg/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Miscellaneous								
- Running water Region Wiesbaden, 33 sampling places	1971-73	163	1.8	1629	14	AA	51 D	

Remarks :

a- Continuous sampling for a monthly sample

b- Daily samples composited into a monthly sample

c- 3 times a week-samples composited into a monthly sample

d- Composited weekly samples

e- Tributary of Main .

Element : Zinc

Medium : Sea water

Unit : µg/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.		Ref.		Remarks
West of Scotland, Atlantic ocean	1970	5	1.4	7.0	3.0	FE	AA	27	GB	a.b
West of Scotland, coastal area	1970	8	1.3	3.4	2.0	FE	AA	27	GB	a.b
Irish Sea :										
- Western part, offshore	1969-70	26	0.8	20.0	5.5	FE	AA	27	GB	a.b
- Eastern part, offshore	1969-70	43	1.8	14.8	5.4	FE	AA	27	GB	a.b
- Western part, shoreline	1970	9	4.9	11.1	6.6	FE	AA	27	GB	a.b
- Eastern part, shoreline	1970	11	3.8	49.1	6.8	FE	AA	27	GB	a.b
- Liverpool Bay	1969-71		2.3	47.6	11.9	I.ex	Pol	24	GB	c
- Colwyn Bay (Wales)	1969-71				11.0	FE	AA	27	GB	
- Conway Bay (Wales)	1969-71				8.8	I.ex	AA	26	GB	d
- Cardigan Bay (Wales)	1969-71		3.63	19.65	7.46	I.ex	Pol	24	GB	d
Bristol Channel	1969-71		3.57	21.42	9.98	I.ex	Pol	24	GB	c.d
- Bristol Channel, South shore	1970-71	4	12	21	15		Pol	19	GB	
- Severn estuary, south shore	1970-71	4	27	52	36		Pol	19	GB	
English Channel, coastal area of UK	1969-70	8	1.2	9.0	4.2	FE	AA	27	GB	a.b

Element : Zinc

Zn.2.2

Medium : Sea water

Unit : µg/l

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
North Sea :								
- coastal area of UK	1969-71	44	0.8	8.8	3.3	FE AA	42 GB	a
- south East , 7 cruises	Jun.71-Sep.72	97	0.2	99	12.7	F Pol	13.1to5 B	
- Belgian shoreline 12 sampling places	1971-72	48	<5	88	<36	ACE AA	15 B	

Remarks :

a- $\bar{X}$ = geometric mean

b- Percentage of total zinc in filtered water : 53 to 56

c- Dominant sources of pollution : domestic and industrial effluents

d- Dominant sources of pollution : runoff from mineralized areas (former mining activity)

Element : Zinc
Medium : River sediments
Unit : mg/kg

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks
Danube	Winter 71-72		250	1162	699	AA	44	D	a
Elbe	Winter 71-72		800	2125	1425	AA	44	D	a
Weser	Winter 71-72		400	3100	1575	AA	44	D	a
Ems	Winter 71-72		200	1408	642	AA	44	D	a
Rhine	Winter 71-72		250	2061	903	AA	44	D	a
- Tributaries :									
- Neckar	Winter 71-72		120	2100	999	AA	44	D	a
- Main	Winter 71-72		100	2100	810	AA	44	D	a
- Dam of Esch/Sûre	Apr.-Sep.1972	8	84	164	124	AA?	9	L	b.c
- Ruhr	1965-72	19	1150	5100	2840		47	D	b
Maas									
- from French frontier to above Liège	Sep.71-Dec.72	17	91	2065	813	UV	15	B	b
- from Liège to Dutch frontier	Sep.71-Dec.72	8	1530	4950	3020	UV	15	B	b
- Tributaries :									
- tributaries, excepting Sambre, Hoyoux ,Vesdre	Sep.71-Dec.72	8	175	720	452	UV	15	B	b
- Sambre	Sep.71-Dec.72	1			4230	UV	15	B	b
- Hoyoux	Sep.71-Dec.72	1			4340	UV	15	B	b
- Vesdre	Sep.71-Dec.72	11	515	4030	1983	UV	15	B	b

Element : Zinc

Medium : River sediments

Unit : mg/kg

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks
Scheldt and affluents from French frontier to above Ghent	Sep.71-Dec.72	6	61	1670	630	UV	15	B	b
Yser and affluents from French frontier to the sea	Sep.71-Dec.72	13	35	180	85	UV	15	B	b
Other Belgian tributaries into the North Sea	Sep.71-Dec.72	6	90	1750	538	UV	15	B	b
Conway (Wales)	1969	143	200	1300	530		26	GB	d
- Conway(Wales),estuary	1969	5	300	2000	900		26	GB	d
- Tributaries from mineralized area (West, former mining activity)	1969	14	1000	>10000	3700		26	GB	d
- Tributaries from unmineralized area (East)	1969	153	<50	850	460		26	GB	d

Remarks :

a- On clay fraction < 2 µm . Sedimentair clay as comparison:95

b- On dry matter

c- 2 sampling places + sediment on the filters of the water purification plant

d- On 80-mesh fraction .

Element : Zinc
Medium : Sea sediments
Unit : mg/kg

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks
Baltic Sea									
- Flensburg fjord									
- Western part, 3 sampling places	May-Oct.70	20	120	910	312	AA	62	DK	On dry matter
- Eastern part(sea side), 4 sampling places	May-Oct.70	15	12	180	137	AA	62	DK	On dry matter
North Sea									
- Belgian shoreline, 11 sampling places	1971-72	43	15	271	128	UV	15	B	On dry matter
Irish Sea									
- Conway Bay, offshore	1969	3	200	400	265		26	GB	On 80-mesh fraction
- Severn estuary ,south shore	1970-71	7	420	590	470	AA	19	GB	On dry matter

Element : Zinc

Medium : Fresh water organisms

Unit : mg/kg DRY matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks.
WATERPLANTS										
Macrophytes	Dam of Esch/Sûre	Jun.-Sep.72	2	35	51	43		9	L	
FISH										
Various species	Dam of Esch/Sûre	Jun.-Sep.72	2	92	105	98		9	L	
	Ruhr	1965-72	16	110	360	205		47	D	

Element : Zinc
Medium : Sea organisms - Seaweeds
Unit : mg/kg DRY matter

Identification of samples	Origin		Period	n	Xmin	Xmax	$\bar{X}$	Meth.		Ref.		Remarks.
SEAWEEDS												
Fucus vesiculosus	Coastal areas :											
	- West of Scotland		1970	7	60	124	72	W.ox.	AA	27	GB	b.c
	- Irish Sea, West		1970	7	42	450	94	W.ox.	AA	27	GB	b.c
	- Irish Sea, East		1970	13	88	962	171	W.ox.	AA	27	GB	b.c
	- Severn estuary and Bristol Channel -	NE	1970-72	8	110	560	269		AA	20	GB	
		NW	1970-72	7	32	80	45		AA	20	GB	
		SE	1970-72	4	300	800	505		AA	19	GB	
		SW	1970-72	4	120	240	177		AA	19	GB	
	- English Channel		1970	7	46	444	80	W.ox.	AA	27	GB	b.c
	- North Sea		1970	6	64	233	110	W.ox.	AA	27	GB	b.c
Porphyra umbilicalis (Laverweed)	Shoreline of Irish Sea											
	- West		1970	9	36	174	63	W.ox.	AA	27	GB	b
	- East		1970	13	35	177	66	W.ox.	AA	27	GB	b

Element : Zinc

Medium : Sea organisms - Molluscs

Unit : mg/kg DRY matter (a)

Identification of samples	Origin		Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
MOLLUSCS										
Ostrea edulis (oyster)	Galway Bay, Ireland		May 72-Mar.73	12	125	250	174		1 Eir	On wet matter
Mytilus edulis (Mussel)	Severn estuary and Bristol Channel -	NE	1970-72	5	130	250	214	AA	20 GB	d
		NW	1970-72	7	62	150	99	AA	20 GB	d
Patella vulgata (limpet)	Shoreline of Irish Sea :									
	- West		1970	9	56	195	90	W.ox. AA	27 GB	b
	- East		1970	8	109	274	158	W.ox. AA	27 GB	b
	Severn estuary and Bristol Channel -	NE	1970-72	8	170	375	256	AA	20 GB	d
		NW	1970-72	9	65	210	137	AA	20 GB	d
		SE	1970-72	4	250	580	372	AA	19 GB	d
		SW	1970-72	4	100	180	140	AA	19 GB	d
		SE	1970-72	7	66	120	83	AA	21 GB	d. n wet matt
		SW	1970-72	5	9.7	75	39	AA	21 GB	d.On wet matt
Littorina littorea (Winckle)	Severn estuary and Bristol Channel -	NE	1970-72	9	97	210	144	AA	20 GB	d
		NW	1970-72	7	60	100	83	AA	20 GB	d
		SE	1970-72	3	160	520	340	AA	19 GB	d
		SW	1970-72	4	100	150	127	AA	19 GB	d
Nucella lapillus (Dog whelk)	Severn estuary and Bristol Channel -	NE	1970-72	5	1200	4200	2300	AA	20 GB	d
		NW	1970-72	9	175	850	430	AA	20 GB	d

Element : Zinc
Medium : Sea organisms - Crustaceans , fish
Unit : mg/kg WET matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
CRUSTACEANS									
Crangon crangon (Brown shrimp)	Severn estuary and Bristol Channel	1970-72	4	35.5	81.7	57.2	AA	21 GB	
	Belgian coast	1972	24	17.3	44.4	26.1	Calc. AA	3 GB	
FISH									
Pleuronectidae									
Pleuronectes platessa (Plaice)	Irish Sea, Morecambe Bay	1972	16	2.5	6.5	5.0	Calc. AA	32 B	
	Bristol Channel and S.E Ireland	1972	8	3.0	6.0	4.35	Calc. AA	32 B	
Gadidae									
Gadus morrhua (Cod)	North Sea, Belgian coastal areas	1972	14	3.3	5.1	4.2	Calc. AA	32 B	
Merlangus merlangus (Whiting)	North Sea, Belgian coastal areas	1972	16	4.9	8.2	5.9	Calc. AA	32 B	
Clupeidae									
Sprattus sprattus (Sprat)	North Sea, Belgian coastal areas	1972	23	16.7	29.3	23.8	Calc. AA	32 B	

Element : Zinc

Zn.6.4

Medium : Sea organisms - Fish, birds.

Unit : mg/kg WET matter

Identification of samples	Origin	Period	n	Xmin	Xmax	$\overline{X}$	Meth.	Ref.	Remarks
FISH									
Various species									
Cod, dogfish, flounder, grey mullet, rocking, shote, whiting, ray	Severn estuary and Bristol Channel	1970-72	17	4.0	52.5	14.4	AA	21 GB	
BIRDS									
Eggs of Larus argentatus (gull)	Severn estuary and Bristol Channel	1970-72	3	12.2	14.9	13.2	AA	21 GB	

Remarks :

a- Unless otherwise specified

b- $\overline{X}$ = geometric mean

c- No significant difference with Fucus sampled in 1961 at the same places

d- Places of sampling : N = north shore of Severn estuary and Bristol Channel

S = south shore of Severn estuary and Bristol Channel

E = eastern part, from upper estuary to Worms Head or Mumbles Head (north shore), and to Watchet or Lynton (south shore)

W = western part, from these places to the open sea.

Element : Zinc
Medium : Drinking water
Unit : µg/l

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks
	Surface waters									
Lindau	Bodensee (40m)	Jun.-Dec.72	7	58	600	160	A AA	45	D	a
Düsseldorf	Rhine	1971-72	22	1.2	326.1	38.2	AA	46	D	
Rotterdam-Honingerdijk	Rhine	Mar.1972	1			45		4	NL	
Andijk	Ijsselmeer	Mar.1972	1			25		4	NL	
	Dam of Esch/Sûre	1972	3	4	11	7	AA?	9	L	b
	Groundwaters									
Berlin	Groundwater	1971-72	7			10.0	AA	46	D	
Berlin	Main water	1971-72	91	100	1673	677	AA	46	D	
Mainz	19 groundwaters	1971-73	47	1	79	19	AA	51	D	
Mainz	Main water	1971-73	23	0.8	91	24	AA	51	D	
Wiesbaden	5 Deep galleries	1971-73	40	1	93	22	AA	51	D	
Wiesbaden	5 Surface galleries	1971-73	7	2	4	3	AA	51	D	
Wiesbaden	6 Leak galleries	1971-73	11	2	13	10	AA	51	D	
Haarlem	Dunes	Mar.72	1			20		4	NL	

Element : Zinc

Zn7.2

Medium : Drinking water

Unit : µg/ℓ

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
Castricum(The Netherlands)	Dunes recharged with Rhine water	Mar.72	1			25		4 NL	
Amsterdam Leiduin	Dunes recharged with Rhine water	Mar.72	1			30		4 NL	
Den Haag	Dunes recharged with Rhine water	Mar.72	1			15		4 NL	
Frankfurt	Not specified(Main water)	1971-72	107	36.8	2671	688	AA	46 D	

Remarks

a- Daily samples composited into a monthly sample.

b- Purified.

Element : Zinc

Medium : Food

Unit : mg/kg or ppm

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
MILK PRODUCTS									
Butter	The Netherlands	1970 ?	12	0.2	1.1	0.62	NA	34 NL	a
MEAT									
Pork, M. longi. dorsi	Bavaria, F.R.G.	1970-71	59	8.6	39.9	22.4	NA	6 D	b
Beef, M. longi. dorsi	Bavaria, F.R.G.	1970-71	20	44.6	112.8	77.9	NA	60 D	b
Veal, M. longi. dorsi	Bavaria, F.R.G.	1970-71	12	10.8	59.0	33.0	NA	60 D	b
CEREALS									
Maize	F.R.G. Experimental field			25.0	68.25			50 D	
VEGETABLES									
Various	F.R.G.			3.7	17.25			50 D	
Onions, Tomato, Leeks, Chicory Witloof, Head of Celery, Green Celery, Scorzonera	Belgium, Experimental fields, few treated	Jan. 1973	10	0.70	6.50	2.65	Calc. AA	32 B	b
Green celery, Scorzonera	Belgium, Experimental fields, normally treated	Jan. 1973	2	6.24	6.34	6.29	Calc. AA	32 B	b
Brussels Sprouts	Belgium, Experimental fields, normally treated	Jan. 1973	2	19.4	20.8	20.1	Calc. AA	32 B	b

Element : Zinc

Medium : Food

Unit : mg/kg or ppm

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks.
FRUIT									
Pears, apples	Belgium -1 st place	Jan.1973	4	1.22	5.48	2.20	Calc. AA	32 B	b
	Belgium -2d place	Jan.1973	4		<0.01		Calc. AA	32 B	b
Fruit juice	F.R.G.			0.36	1.84			50 D	

Remarks :

a- On material as sold.

b- On wet matter .

Element : Zinc
Medium : Air
Unit :

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
Particulate matter								
United Kingdom, 7 sampling places	1971-72		0.064	0.415	0.204	NA	43 GB	µg/kg air
Federal Republic Germany :								
- Frankfurt am Main, street with heavy traffic	Jul.1972	16	0.27	6.48	2.68	AA	63 D	µg/m³
- München, 6 sampling places, monthly samples, 1971	1971	52	355	43100	7807	NA	56 D	µg/g particulates
Rain (+ fallout)								
United Kingdom , 1 sampling place(pure area)	1971				85	NA	43 GB	µg/ℓ

[redacted]

Element : Zinc

Medium : Soil

Unit : mg/kg

Zn.10

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.		Remarks
Soil, 0-0.3m	F.R.G., 4 places			3.5	717.5			50	D	
Garbage compost (5 different)	F.R.G.			267	2410			50	D	
Sandy soil under pines, 3 layers to 0.2 -0.28 m depth	Belgium, Bokrijk	1970	6	6.3	14.4	10	AA	32	B	
Sandy soil, cultivated	Belgium, Bredene	1968	2	120	180	150	UV	32	B	
Garden soil with humus	Belgium, Meisse	1968	5	140	230	182	UV	32	B	
Soil, 1.5 km from a metallurgical plant	Belgium	1968		600	6800		UV	32	B	

Element : Zinc
Medium : Miscellaneous
Unit : mg/kg DRY matter

Identification of samples	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remarks
PLANTS								
Bredene, Belgium -Sandy soil, cultivated								
- Meadow grass	1968	1			45	UV	32 B	
	1970	3	75	91	85	AA	32 B	
- Wheat	1968	1			52	UV	32 B	
- Barley	1968	1			72	UV	32 B	
Sint Truiden, Belgium								
- Fruit -tree leaves (apple, pear, plum, cherry-trees)	1964	15			35	UV	32 B	
Bokrijk, Belgium -Sandy soil								
- Pine-needles	1970	5	74	95	84.5	AA	32 B	
Vicinity of a metallurgical plant, Belgium								
- Pine-needles, spinach, rhubarb	1972	5	370	1450	846	AA	32 B	

Zr.10 - Soil

ZIRCONIUM

[redacted]

Element : Zirconium

Medium : Soil

Unit : mg/kg

Identification of samples	Origin	Period	n	Xmin	Xmax	$\bar{X}$	Meth.	Ref.	Remark
Loess formation, in a forest, 5 layers, to 1 m depth	Belgium, Meerdael	1964	5	530	860	664	UV	32 B	
Loess formation, in a semi-industrial region, 6 layers to 1.2 m depth	Belgium, Halle	1964	6	335	485	415	UV	32 B	
Sandy soil under pines, 3 layers, to 0.2 -0.28 m depth	Belgium, Bokrijk	1970	6	38.7	227	109	UV	32 B	
Sandy soil, cultivated	Belgium, Bredene	1968	2	360	390	375	UV	32 B	
Garden soil with humus	Belgium, Meisse	1968	5	310	450	360	UV	32 B	

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