Chapter 1 Results of the Initial Environmental Survey in FY 2006

1. Purpose of the survey

The Initial Environmental Survey is aimed at understanding the environmental presence of chemicals requiring examination of the appropriateness of the designation as a Designated Chemical Substance in the Law Concerning Reporting, etc. of Releases of Specific Chemical Substances to the Environment and Promoting Improvement in Their Management (Law No. 86 of 1999) (hereafter, the PRTR Law) and chemicals requiring survey from social viewpoints.

2. Target chemicals

In the FY 2006 Initial Environmental Survey, 56 chemicals (groups) were selected and designated as target chemicals. The combinations of target chemicals and the surveyed media are given below.

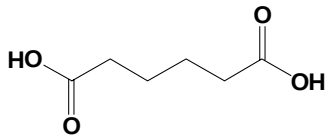
Target chemicals		Designated Class in		Surveyed media			
No	Name	The Chemical Substances Control Law	The PRTR Law	Surface water	Sediment	Wildlife	Air
[1]	Adipic acid			○	○		
[2]	3'-Amino-4'-methoxyacetanilide		II	○			
[3]	4-Allyl-1,2-dimethoxybenzene		II	○			
[4]	Anthraquinone			○			
[5]	Indium and its compounds (as Indium)		II	○			○
[6]	*O*-Ethyl *O*-2-(isopropoxycarbonyl)phenyl *N*-isopropylphosphoramidothioate (synonym: Isofenphos)	II Monitored	II	○			
[7]	*S*-Ethyl 2-(4-chloro-2-methylphenoxy)thioacetate (synonym: Phenothiol or MCPA-thioethyl)		I	○			○
[8]	2-Ethylamino-4-isopropylamino-6-methylthio-1,3,5-triazine (synonym: Ametryn)	II Monitored	II	○			
[9]	5-Ethyl-5-phenyl-2,4,6(1*H*,3*H*,5*H*)-pyrimidinetrione (synonym: Phenobarbital)	II Monitored	II	○			○
[10]	Ethyleneimine		I	○			
[11]	4'-Ethoxyacetanilide (synonym: Phenacetin)	II Monitored	I	○			
[12]	1,2-Epoxybutane		II	○			○
[13]	4-Oxiranyl-1,2-epoxycyclohexane		II				○
[14]	5-Chloro-*N*-{2-[4-(2-ethoxyethyl)-2,3-dimethylphenoxy] ethyl}-6-ethylpyrimidine-4-amine (synonym: Pylimidifen)		II	○			
[15]	2-(4-Chloro-6-ethylamino-1,3,5-triazine-2-yl)amino-2-methylpropiononitrile (synonym: Cyanazine)		II	○			○
[16]	Chlorotrifluoromethane (synonym: CFC-13)		I	○			
[17]	*O*-6-Chloro-3-phenyl-4-pyridazinyl *S*-*n*-octyl thiocarbonate (synonym: Pyridate)		II	○			○
[18]	2-Chloropropionic acid		II	○			○
[19]	1-Chloro-2-methylpropene			○	○		
[20]	α-Cyano-3-phenoxybenzyl 2,2-dichloro-1-(4-ethoxyphenyl) cyclopropanecarboxylate (synonym: Cycloprothrin)		II	○			○
[21]	[1α(*S**),3α]-(±)-Cyano(3-phenoxyphenyl)methyl 3-(2,2-dichloroethenyl)-2,2-dimethylcyclopropanecarboxylate (synonym: α-Cypermethrin)		II	○			
[22]	Cyclohexanone			○	○		
[23]	1-(3,5-Dichloro-2,4-difluorophenyl)-3-(2,6-difluorobenzoyl)urea (synonym: Teflubenzuron)		II	○			○
[24]	2,4'-Dichloro-α-(5-pyrimidinyl)benzhydryl alcohol (synonym: Fenarimol)		II	○			○
[25]	2-(2,4-Dichlorophenyl)-1-(1*H*-1,2,4-triazol-1-yl)-2-hexanol (synonym: Hexaconazole)		II	○			○

Target chemicals		Designated Class in		Surveyed media			
No	Name	The Chemical Substances Control Law	The PRTR Law	Surface water	Sediment	Wildlife	Air
[26]	Dichlorobromomethane			○	○		
[27]	Mixture of 2,4-dinitro-6-octylphenyl crotonate and 2,6-dinitro-4-octylphenyl crotonate(octyl = 1-methylheptyl, 1-ethylhexy or 1-propylpentyl) (synonym: Dinocap or DPC)		II				○
[28]	Divinylbenzene	III Monitored	II	○			
[29]	5,5-Diphenyl-2,4-imidazolidinedione (synonym: Phenytoin)	II Monitored	II	○			
[30]	2-(Di-*n*-butylamino)ethanol	II Monitored	I	○			○
[31]	Dibromotetrafluoroethane (synonym: Halon-2402)		I	○			
[32]	1,4-Dibromobutane		II	○			
[33]	1,3-Dibromopropane	II Monitored	II	○			
[34]	Thallium and its compounds (as Thallium)		II	○			○
[35]	*O,O*-Diethyl *O*-2-quinoxalinyl phosphorothioate (synonym: Quinalphos)		I	○			○
[36]	Tetrachlorodifluoroethane (synonym: CFC-112)		I	○			
[37]	2,3,5,6-Tetrafluoro-4-methylbenzyl (*Z*)-3- (2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropane carboxylate (synonym: Tefluthrin)		II	○			○
[38]	Tellurium and its compounds (as Tellurium)		II	○			○
[39]	2,4,6-Trinitrotoluene		I	○			
[40]	Phenanthrene		II			○	○
[41]	1-*tert*-Butyl-3-(2,6-diisopropyl-4-phenoxyphenyl) thiourea (synonym: Diafenthiuron)		II	○			
[42]	*N*-Propyl-*N*-[2-(2,4,6-trichlorophenoxy)ethyl] imidazole-1-carboxamide (synonym: Prochloraz)		II	○			○
[43]	Bromochlorodifluoromethane (synonym: Halon-1211)		I	○			
[44]	2-(4-Bromodifluoromethoxyphenyl)-2-methylpropyl 3-phenoxybenzyl ether (synonym: Halfenprox)		II	○			
[45]	3-Bromo-1-propene (synonym: Allyl bromide)		II	○			
[46]	1,4,5,6,7,7-Hexachlorobicyclo[2.2.1]-5-heptene-2,3-dicarboxylic acid (synonym: Chlorendic acid)	II Monitored	I	○			○
[47]	Hexahydro-1,3,5-trinitro-1,3,5-triazine (synonym: Cyclonite)		II	○			○
[48]	Benzylidyne trichloride		I Specified				○
[49]	Benzylidene dichloride		I				○
[50]	Benzyl alcohol			○	○		
[51]	Poly(oxyethylene) alkyl (C_{12-15}) ethers		I		○		
	[51-1] Poly(oxyethylene) dodecyl ethers(polymerisation degree = 2-19)				○		
	[51-2] Poly(oxyethylene) tridecyl ethers(polymerisation degree = 2-19)				○		
	[51-3] Poly(oxyethylene) tetradecyl ethers(polymerisation degree = 2-19)				○		
	[51-4] Poly(oxyethylene) pentadecyl ethers(polymerisation degree = 2-19)				○		
[52]	Methyl 2-(4,6-dimethoxy-2-pyrimizinyloxy)-6-[1-(methoxyimino)ethyl]benzoate (synonym: Pyriminobac-methyl)		II	○			○
[53]	Methyl 3-(4-methoxy-6-methyl-1,3,5-triazine-2-ylcarbamoylsulfamoyl)-2-thenoate (synonym: Thifensulfuron methyl)		II	○			○
[54]	2-Methyl-1,1'-biphenyl-3-ylmethyl (*Z*)-3- (2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropane carboxylate (synonym: Bifenthrin)	II Monitored	II				○
[55]	9-Methoxy-7*H*-furo[3,2-*g*][1]benzopyran-7-one (synonym: Methoxsalen)	II Monitored	I Specified	○			
[56]	(*Z*)-2-Chloro-1-(2,4,5-trichlorophenyl)vinyl dimethyl phosphate (synonym: Tetrachlorvinphos or CVMP)	II Monitored	II	○			○

(Note) "The Chemical Substances Control Law" hereafter means "Law Concerning the Examination and Regulation of Manufacture, etc. of Chemical Substances (Law No. 117 of 1973)."

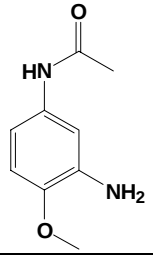
Chemical and physical properties of target chemicals of the Initial Environmental Survey are as follows.

［1］ Adipic acid



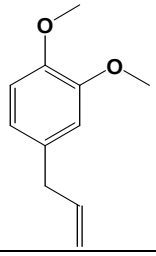
Molecular formula:	$C_6H_{10}O_4$
CAS:	124-04-9
ENCS:	2-858
MW:	146.14
mp:	152℃[1)]
bp:	337.5℃[1)]
SW:	15g/L (15℃)[1)]
Specific gravity:	1.36 (25/4℃)[1)]
logPow:	0.08[2)]

［2］ 3’-Amino-4’-methoxyacetanilide



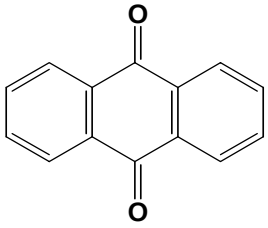
Molecular formula:	$C_9H_{12}N_2O_2$
CAS:	6375-47-9
ENCS:	3-731、3-2797
MW:	180.20
mp:	Uncertain
bp:	Uncertain
SW:	Uncertain
Specific gravity:	Uncertain
logPow:	Uncertain

［3］ 4-Allyl-1,2-dimethoxybenzene



Molecular formula:	$C_{11}H_{14}O_2$
CAS:	93-15-2
ENCS:	3-638
MW:	178.23
mp:	-4℃[3)]
bp:	254.7℃[3)]
SW:	500mg/L(25℃)[4)]
Specific gravity:	1.03 (25℃)[5)]
logPow:	3.03[6)]

［4］ Anthraquinone



Molecular formula:	$C_{14}H_8O_2$
CAS:	84-65-1
ENCS:	4-686
MW:	208.21
mp:	286℃[1)]
bp:	377℃[1)]
SW:	1.35mg/L (25℃)[7)]
Specific gravity:	1.42～1.44 (20/4℃)[1)]
logPow:	3.39[2)]

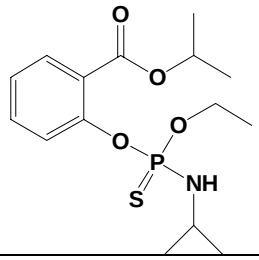
［5］ Indium and its compounds (as Indium)

In

Molecular formula:	dependent on the molecule
CAS:	7440-74-6 etc.
ENCS:	dependent on the molecule
MW:	dependent on the molecule
mp:	dependent on the molecule
bp:	dependent on the molecule
SW:	dependent on the molecule
Specific gravity:	dependent on the molecule
logPow:	dependent on the molecule

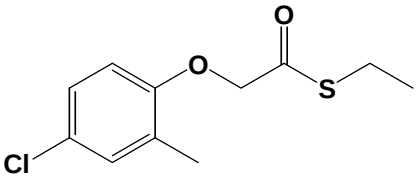
(Abbreviations) CAS: CAS registry number, ENCS: registry number in the Existing and New Chemical Substances List, MW: molecular weight, mp: melting point, bp: boiling point, SW: solubility in water, logPow: *n*-octanol-water partition coefficient, kPa.

［6］ *O*-Ethyl *O*-2-(isopropoxycarbonyl)phenyl *N*-isopropylphosphoramidothioate (synonym: Isofenphos)



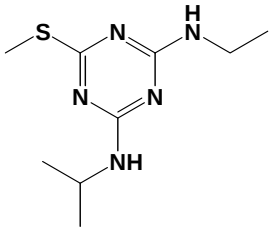
Molecular formula:	$C_{15}H_{24}NO_4PS$
CAS:	25311-71-1
ENCS:	3-3683
MW:	345.39
mp:	<-12°C[3)]
bp:	120°C (0.01mmHg)[3)]
SW:	22.1mg/L (20°C)[7)]
Specific gravity:	1.13 (20°C)[8)]
logPow:	4.12[2)]

［7］ *S*-Ethyl 2-(4-chloro-2-methylphenoxy)thioacetate (synonym: Phenothiol or MCPA-thioethyl)



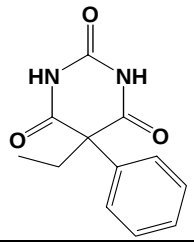
Molecular formula:	$C_{11}H_{13}ClO_2S$
CAS:	25319-90-8
ENCS:	Uncertain
MW:	244.74
mp:	41.5°C[8)]
bp:	165°C (7mmHg)[8)]
SW:	2.3mg/L (25°C)[8)]
Specific gravity:	Uncertain
logPow:	4.05[8)]

［8］ 2-Ethylamino-4-isopropylamino-6-methylthio-1,3,5-triazine (synonym: Ametryn)



Molecular formula:	$C_9H_{17}N_5S$
CAS:	834-12-8
ENCS:	5-3847
MW:	227.33
mp:	88°C[3)]
bp:	Uncertain
SW:	209mg/L (25°C)[7)]
Specific gravity:	1.18 (22°C)[8)]
logPow:	2.98[2)]

［9］ 5-Ethyl-5-phenyl-2,4,6(1*H*,3*H*,5*H*)-pyrimidinetrione (synonym: Phenobarbital)

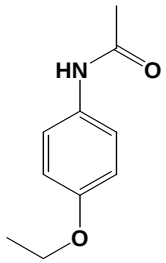


Molecular formula:	$C_{12}H_{12}N_2O_3$
CAS:	50-06-6
ENCS:	9-2248
MW:	232.24
mp:	174～178°C[1)]
bp:	Uncertain
SW:	1,100mg/L (25°C)[7)]
Specific gravity:	1.35[9)]
logPow:	1.47[2)]

［10］ Ethyleneimine

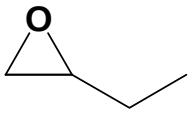
Molecular formula:	C_2H_5N
CAS:	151-56-4
ENCS:	5-2
MW:	43.07
mp:	-71.5°C[10)]
bp:	55～56°C[10)]
SW:	Readily soluble[11)]
Specific gravity:	0.83 (24/4°C)[1)]
logPow:	-0.28[6)]

［11］ 4'-Ethoxyacetanilide (synonym: Phenacetin)



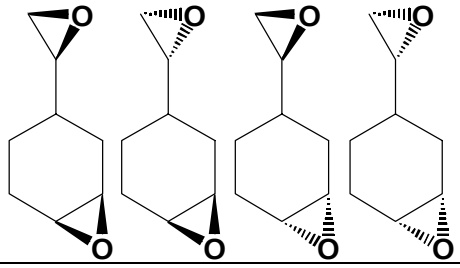
Molecular formula:	$C_{10}H_{13}NO_2$
CAS:	62-44-2
ENCS:	3-697
MW:	179.22
mp:	134～135℃[1)]
bp:	242～245℃[10)]
SW:	766mg/L (25℃)[12)]
Specific gravity:	1.36 (20/4℃)[13)]
logPow:	1.58[14)]

［12］ 1,2-Epoxybutane



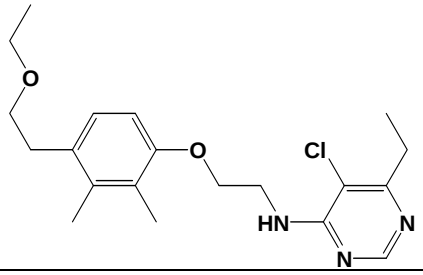
Molecular formula:	C_4H_8O
CAS:	106-88-7
ENCS:	2-229
MW:	72.11
mp:	-150℃[3)]
bp:	63.4℃[3)]
SW:	95g/L (25℃)[15)]
Specific gravity:	0.83 (20℃)[3)]
logPow:	0.86[6)]

［13］ 4-Oxiranyl-1,2-epoxycyclohexane



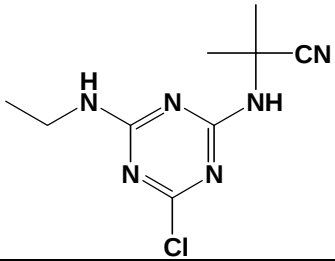
Molecular formula:	$C_8H_{12}O_2$
CAS:	106-87-6
ENCS:	3-2328
MW:	140.18
mp:	<-55℃[3)]
bp:	227℃[3)]
SW:	35.2[6)]
Specific gravity:	1.10 (20℃)[3)]
logPow:	0.47[4)]

［14］ 5-Chloro-*N*-{2-[4-(2-ethoxyethyl)-2,3-dimethylphenoxy]ethyl}-6-ethylpyrimidine-4-amine (synonym: Pylimidifen)



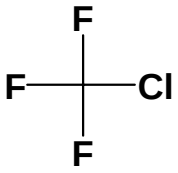
Molecular formula:	$C_{20}H_{28}ClN_3O_2$
CAS:	105779-78-0
ENCS:	Uncertain
MW:	377.91
mp:	70℃[8)]
bp:	Uncertain
SW:	2.17mg/L (25℃)[8)]
Specific gravity:	Uncertain
logPow:	4.84[6)]

［15］ 2-(4-Chloro-6-ethylamino-1,3,5-triazine-2-yl)amino-2-methylpropiononitrile (synonym: Cyanazine)



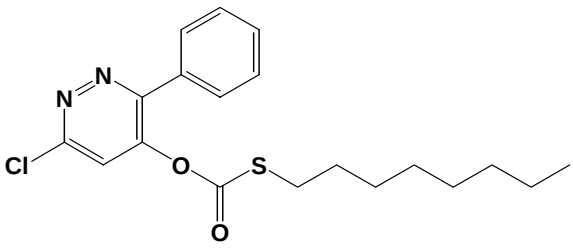
Molecular formula:	$C_9H_{13}ClN_6$
CAS:	21725-46-2
ENCS:	Uncertain
MW:	240.69
mp:	167.5～169℃[1)]
bp:	Uncertain
SW:	170mg/L (25℃)[16)]
Specific gravity:	1.29 (20℃)[8)]
logPow:	2.22[2)]

［16］ Chlorotrifluoromethane (synonym: CFC-13)



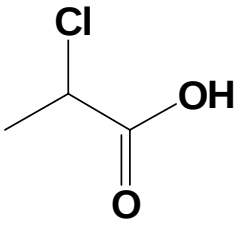
Molecular formula:	$CClF_3$
CAS:	75-72-9
ENCS:	2-48
MW:	104.46
mp:	-181°C[3)]
bp:	-81.4°C[3)]
SW:	90 mg/L (25°C)[11)]
Specific gravity:	Uncertain
logPow:	1.65[2)]

［17］ *O*-6-Chloro-3-phenyl-4-pyridazinyl *S*-*n*-octyl thiocarbonate (synonym: Pyridate)



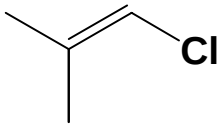
Molecular formula:	$C_{19}H_{23}ClN_2O_2S$
CAS:	55512-33-9
ENCS:	Uncertain
MW:	378.92
mp:	27°C[1)]
bp:	220°C[1)]
SW:	1.5 mg/L (20°C)[8)]
Specific gravity:	1.56 (20°C)[1)]
logPow:	5.73[6)]

［18］ 2-Chloropropionic acid



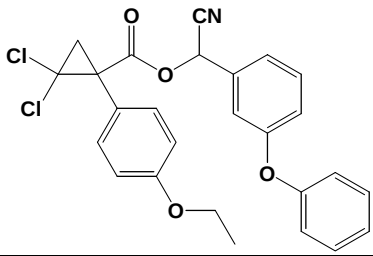
Molecular formula:	$C_3H_5ClO_2$
CAS:	598-78-7
ENCS:	2-1157
MW:	108.52
mp:	-12.1°C[3)]
bp:	186°C[3)]
SW:	Readily soluble (20°C)[7)]
Specific gravity:	1.26 (20/4°C)[3)]
logPow:	0.76[6)]

［19］ 1-Chloro-2-methylpropene



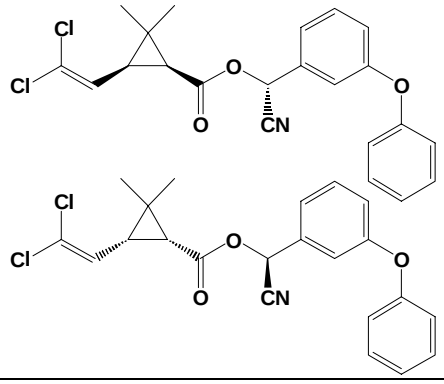
Molecular formula:	C_4H_7Cl
CAS:	513-37-1
ENCS:	2-117
MW:	90.55
mp:	Uncertain
bp:	68°C[3)]
SW:	1.00mg/L (25°C)[18)]
Specific gravity:	0.919 (20/4°C)[3)]
logPow:	2.58[6)]

［20］ *α*-Cyano-3-phenoxybenzyl 2,2-dichloro-1-(4-ethoxyphenyl)cyclopropanecarboxylate (synonym: Cycloprothrin)



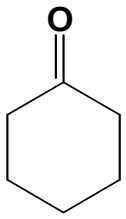
Molecular formula:	$C_{26}H_{21}Cl_2NO_4$
CAS:	63935-38-6
ENCS:	3-3983
MW:	482.36
mp:	<25°C[8)]
bp:	Uncertain
SW:	0.091mg/L (25°C)[8)]
Specific gravity:	Uncertain
logPow:	4.19[8)]

［21］ [1α(*S**),3α]-(±)-Cyano(3-phenoxyphenyl)methyl 3-(2,2-dichloroethenyl)-2,2-dimethylcyclopropanecarboxylate (synonym: α-Cypermethrin)



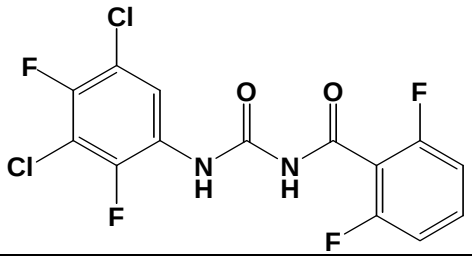
Molecular formula:	$C_{22}H_{19}Cl_2NO_3$
CAS:	67375-30-8
ENCS:	Uncertain
MW:	416.30
mp:	79.5°C[8)]
bp:	Uncertain
SW:	0.01mg/L (25°C)[8)]
Specific gravity:	1.18 (20°C)[8)]
logPow:	6.94[8)]

［22］ Cyclohexanone



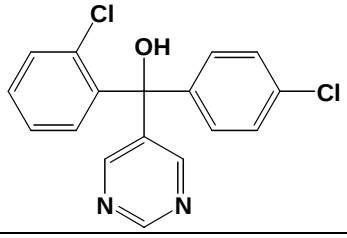
Molecular formula:	$C_6H_{10}O$
CAS:	108-94-1
ENCS:	3-2376
MW:	98.14
mp:	-32.1°C[3)]
bp:	156°C[1)]
SW:	25g/L (25°C)[7)]
Specific gravity:	0.942 (20°C)[1)]
logPow:	0.81[2)]

［23］ 1-(3,5-Dichloro-2,4-difluorophenyl)-3-(2,6-difluorobenzoyl)urea (synonym: Teflubenzuron)



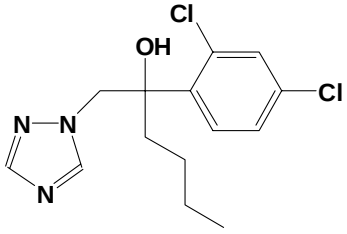
Molecular formula:	$C_{14}H_6Cl_2F_4N_2O_2$
CAS:	83121-18-0
ENCS:	Uncertain
MW:	381.11
mp:	221～224°C[8)]
bp:	Uncertain
SW:	0.019mg/L (25°C)[8)]
Specific gravity:	Uncertain
logPow:	4.56[17)]

［24］ 2,4'-Dichloro-α-(5-pyrimidinyl)benzhydryl alcohol (synonym: Fenarimol)



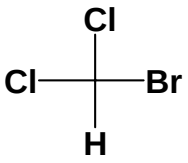
Molecular formula:	$C_{17}H_{12}Cl_2N_2O$
CAS:	60168-88-9
ENCS:	Uncertain
MW:	381.11
mp:	117～119°C[1)]
bp:	Uncertain
SW:	13.7mg/L (25°C)[1)]
Specific gravity:	Uncertain
logPow:	3.60[2)]

［25］ 2-(2,4-Dichlorophenyl)-1-(1*H*-1,2,4-triazol-1-yl)-2-hexanol (synonym: Hexaconazole)



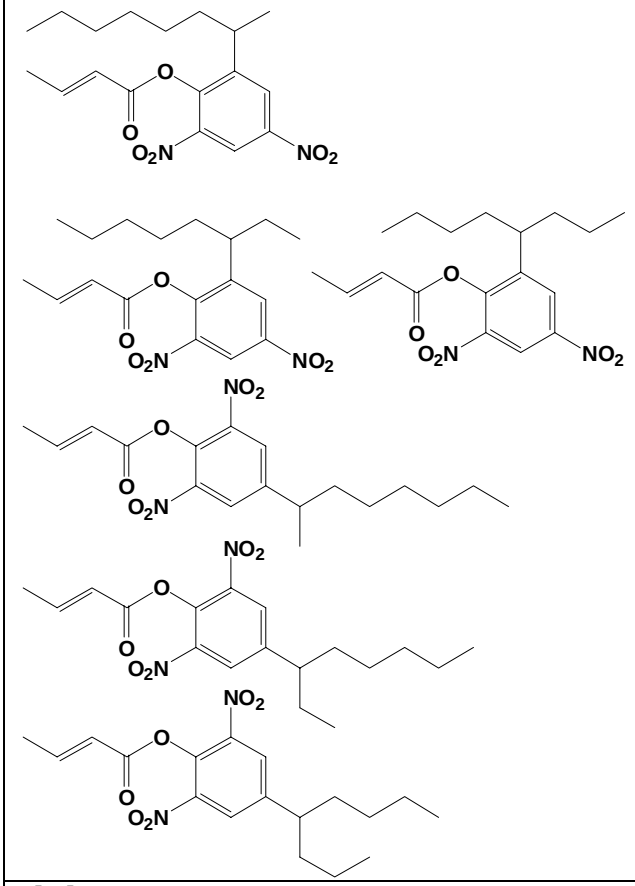
Molecular formula:	$C_{14}H_{17}Cl_2N_3O$
CAS:	79983-71-4
ENCS:	Uncertain
MW:	314.21
mp:	111°C[1)]
bp:	Uncertain
SW:	17mg/L (20°C)[8)]
Specific gravity:	1.29 (25°C)[1)]
logPow:	3.90[8)]

［26］ Dichlorobromomethane



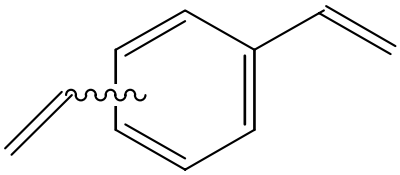
Molecular formula:	$CHBrCl_2$
CAS:	75-27-4
ENCS:	Uncertain
MW:	163.83
mp:	-57℃[3)]
bp:	90℃[3)]
SW:	3,030mg/L (35℃)[7)]
Specific gravity:	1.98 (20/4℃)[3)]
logPow:	2.00[24)]

［27］ Mixture of 2,4-dinitro-6-octylphenyl crotonate and 2,6-dinitro-4-octylphenyl crotonate(octyl = 1-methylheptyl, 1-ethylhexy or 1-propylpentyl) (synonym: Dinocap or DPC)



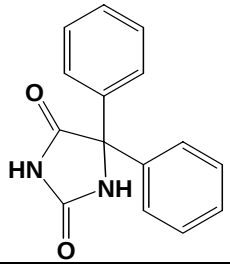
Molecular formula:	$C_{18}H_{24}N_2O_6$
CAS:	131-72-6
ENCS:	3-840
MW:	364.39
mp:	Uncertain
bp:	Uncertain
SW:	0.0162mg/L (25℃)[19)]
Specific gravity:	Uncertain
logPow:	5.98[6)]

［28］ Divinylbenzene



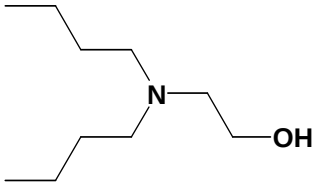
Molecular formula:	$C_{10}H_{10}$
CAS:	1321-74-0
ENCS:	3-14
MW:	130.19
mp:	Uncertain
bp:	Uncertain
SW:	52.5mg/L (25℃)[19)]
Specific gravity:	Uncertain
logPow:	3.80[6)]

［29］ 5,5-Diphenyl-2,4-imidazolidinedione (synonym: Phenytoin)



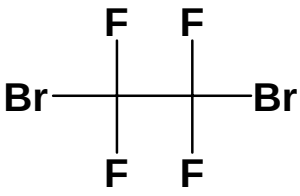
Molecular formula:	$C_{15}H_{12}N_2O_2$
CAS:	57-41-0
ENCS:	9-621
MW:	252.27
mp:	295～298°C[1)]
bp:	Uncertain
SW:	32mg/L (22°C)[7)]
Specific gravity:	Uncertain
logPow:	2.47[2)]

［30］ 2-(Di-*n*-butylamino)ethanol



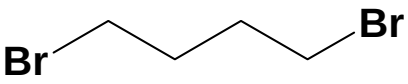
Molecular formula:	$C_{10}H_{23}NO$
CAS:	102-81-8
ENCS:	2-353
MW:	173.30
mp:	-75°C[3)]
bp:	229～230°C[3)]
SW:	4g/L (25°C)[20)]
Specific gravity:	0.96 (20/4°C)[3)]
logPow:	2.01[6)]

［31］ Dibromotetrafluoroethane (synonym: Halon-2402)



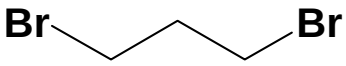
Molecular formula:	$C_2Br_2F_4$
CAS:	124-73-2
ENCS:	2-89
MW:	259.82
mp:	-110.3°C[3)]
bp:	47.4°C[3)]
SW:	3.00mg/L (25°C)[21)]
Specific gravity:	2.15 (25°C)[3)]
logPow:	2.96[6)]

［32］ 1,4-Dibromobutane



Molecular formula:	$C_4H_8Br_2$
CAS:	110-52-1
ENCS:	2-59、9-2008
MW:	215.91
mp:	-16.5°C[3)]
bp:	197°C[3)]
SW:	350mg/L (25°C)[3)]
Specific gravity:	1.82 (25°C)[3)]
logPow:	2.99[6)]

［33］ 1,3-Dibromopropane



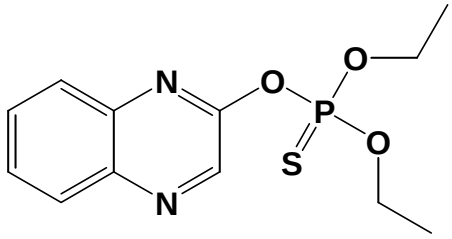
Molecular formula:	$C_3H_6Br_2$
CAS:	109-64-8
ENCS:	2-59
MW:	201.89
mp:	-36°C[1)]
bp:	167°C[1)]
SW:	1,700mg/L (30°C)[7)]
Specific gravity:	1.97 (25/4°C)[1)]
logPow:	2.37[2)]

［34］ Thallium and its compounds (as Thallium)

Tl

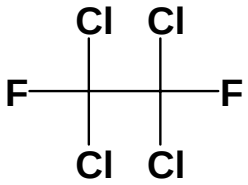
Molecular formula:	dependent on the molecule
CAS:	7440-28-0 etc.
ENCS:	dependent on the molecule
MW:	dependent on the molecule
mp:	dependent on the molecule
bp:	dependent on the molecule
SW:	dependent on the molecule
Specific gravity:	dependent on the molecule
logPow:	dependent on the molecule

［35］ *O,O*-Diethyl *O*-2-quinoxalinyl phosphorothioate (synonym: Quinalphos)



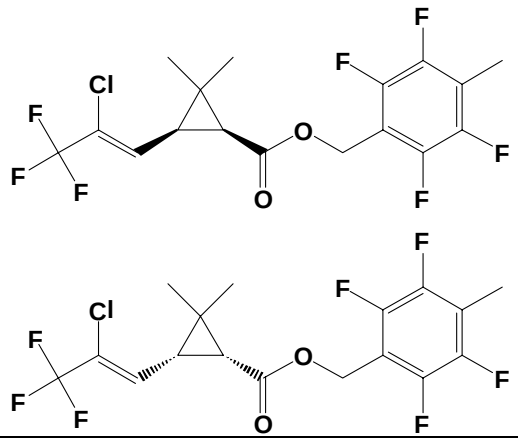
Molecular formula:	$C_{12}H_{15}N_2O_3PS$
CAS:	13593-03-8
ENCS:	Uncertain
MW:	298.30
mp:	31.5℃[8)]
bp:	142℃[8)]
SW:	22mg/L (24℃)[7)]
Specific gravity:	Uncertain
logPow:	4.44[8)]

［36］ Tetrachlorodifluoroethane (synonym: CFC-112)



Molecular formula:	$C_2Cl_4F_2$
CAS:	76-12-0
ENCS:	2-96
MW:	203.83
mp:	24.8℃[3)]
bp:	92.8℃[3)]
SW:	120mg/L (25℃)[11)]
Specific gravity:	1.64 (25/4℃)[3)]
logPow:	3.41[6)]

［37］ 2,3,5,6-Tetrafluoro-4-methylbenzyl (*Z*)-3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropanecarboxylate (synonym: Tefluthrin)



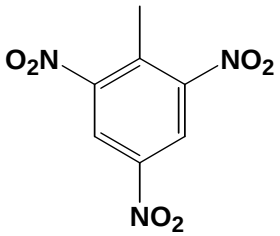
Molecular formula:	$C_{17}H_{14}ClF_7O_2$
CAS:	79538-32-2
ENCS:	Uncertain
MW:	418.73
mp:	44℃[8)]
bp:	156℃[8)]
SW:	0.02mg/L (20℃)[18)]
Specific gravity:	1.48 (25℃)[8)]
logPow:	6.50[8)]

［38］ Tellurium and its compounds (as Tellurium)

Te

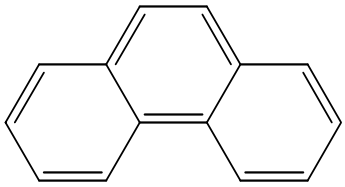
Molecular formula:	dependent on the molecule
CAS:	13494-80-9 etc.
ENCS:	dependent on the molecule
MW:	dependent on the molecule
mp:	dependent on the molecule
bp:	dependent on the molecule
SW:	dependent on the molecule
Specific gravity:	dependent on the molecule
logPow:	dependent on the molecule

［39］ 2,4,6-Trinitrotoluene



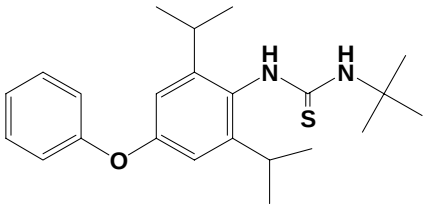
Molecular formula:	$C_7H_5N_3O_6$
CAS:	118-96-7
ENCS:	3-440
MW:	227.13
mp:	80.1°C[1)]
bp:	240°C[10)]
SW:	115mg/L (23°C)[22)]
Specific gravity:	1.65 (20/4°C)[1)]
logPow:	1.60[2)]

［40］ Phenanthrene



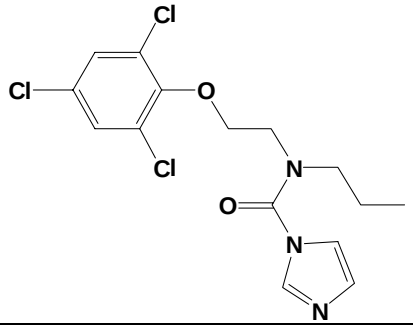
Molecular formula:	$C_{14}H_{10}$
CAS:	85-01-8
ENCS:	4-635
MW:	178.23
mp:	101°C[3)]
bp:	340°C[3)]
SW:	1.6 mg/L (15°C)[23)]
Specific gravity:	0.98 (4°C)[3)]
logPow:	4.46[2)]

［41］ 1-*tert*-Butyl-3-(2,6-diisopropyl-4-phenoxyphenyl)thiourea (synonym: Diafenthiuron)



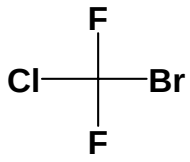
Molecular formula:	$C_{23}H_{32}N_2OS$
CAS:	80060-09-9
ENCS:	Uncertain
MW:	384.58
mp:	146°C[8)]
bp:	Uncertain
SW:	0.06mg/L (25°C)[8)]
Specific gravity:	Uncertain
logPow:	6.00[2)]

［42］ *N*-Propyl-*N*-[2-(2,4,6-trichlorophenoxy)ethyl]imidazole-1-carboxamide (synonym: Prochloraz)



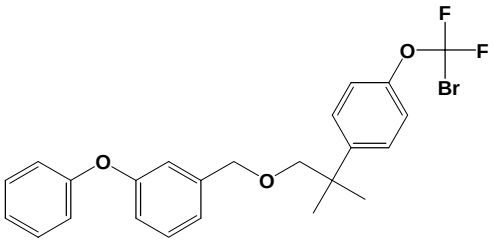
Molecular formula:	$C_{15}H_{16}Cl_3N_3O_2$
CAS:	67747-09-5
ENCS:	Uncertain
MW:	376.67
mp:	39～41°C[1)]
bp:	208～210°C[1)]
SW:	34mg/L (25°C)[16)]
Specific gravity:	1.42 (20°C)[8)]
logPow:	4.10[17)]

［43］ Bromochlorodifluoromethane (synonym: Halon-1211)



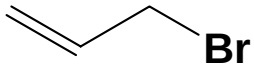
Molecular formula:	$CBrClF_2$
CAS:	353-59-3
ENCS:	2-45
MW:	165.36
mp:	-159.5°C[3]
bp:	-3.7°C[3]
SW:	277mg/L (25°C)[19]
Specific gravity:	1.85 (liquid)[20]
logPow:	1.90[6]

［44］ 2-(4-Bromodifluoromethoxyphenyl)-2-methylpropyl 3-phenoxybenzyl ether (synonym: Halfenprox)



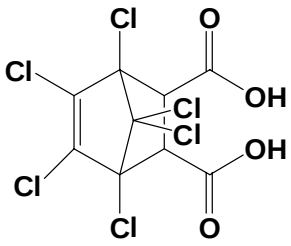
Molecular formula:	$C_{24}H_{23}BrF_2O_3$
CAS:	111872-58-3
ENCS:	Uncertain
MW:	477.34
mp:	<25°C[8]
bp:	291°C[8]
SW:	0.00005mg/L (25°C)[8]
Specific gravity:	Uncertain
logPow:	4.10[8]

［45］ 3-Bromo-1-propene (synonym: Allyl bromide)



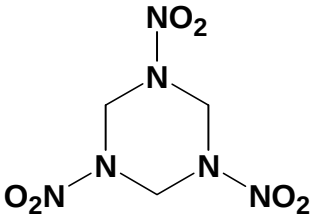
Molecular formula:	C_3H_5Br
CAS:	106-95-6
ENCS:	2-107
MW:	120.98
mp:	-119°C[1]
bp:	71.3°C[1]
SW:	3,830mg/L (25°C)[7]
Specific gravity:	1.40 (20/4°C)[1]
logPow:	1.79[2]

［46］ 1,4,5,6,7,7-Hexachlorobicyclo[2.2.1]-5-heptene-2,3-dicarboxylic acid (synonym: Chlorendic acid)



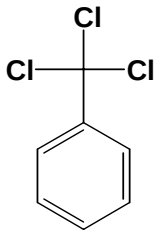
Molecular formula:	$C_9H_4Cl_6O_4$
CAS:	115-28-6
ENCS:	4-619
MW:	388.85
mp:	208～210°C[25]
bp:	Uncertain
SW:	3,500mg/L (25°C)[4]
Specific gravity:	Uncertain
logPow:	3.14[6]

［47］ Hexahydro-1,3,5-trinitro-1,3,5-triazine (synonym: Cyclonite)



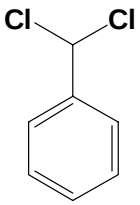
Molecular formula:	$C_3H_6N_6O_6$
CAS:	121-82-4
ENCS:	5-985
MW:	222.12
mp:	205.5°C[3]
bp:	276～280°C[26]
SW:	59.7mg/L (25°C)[7]
Specific gravity:	1.82 (20/4°C)[3]
logPow:	0.87[24]

［48］ Benzylidyne trichloride



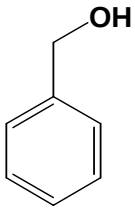
Molecular formula:	$C_7H_5Cl_3$
CAS:	98-07-7
ENCS:	3-87
MW:	195.47
mp:	-5°C[1)]
bp:	221°C[1)]
SW:	53mg/L (5°C)[27)]
Specific gravity:	1.38 (20/4°C)[1)]
logPow:	3.90[6)]

［49］ Benzylidene dichloride



Molecular formula:	$C_7H_6Cl_2$
CAS:	98-87-3
ENCS:	3-101
MW:	161.03
mp:	-16.4°C[3)]
bp:	205°C[1)]
SW:	250mg/L (30°C)[27)]
Specific gravity:	1.26 (14/4°C)[1)]
logPow:	2.97[6)]

［50］ Benzyl alcohol



Molecular formula:	C_7H_8O
CAS:	100-51-6
ENCS:	3-1011
MW:	108.14
mp:	-15.2°C[3)]
bp:	205.3°C[3)]
SW:	42.9g/L (25°C)[7)]
Specific gravity:	1.04 (20/4°C)[3)]
logPow:	1.10[2)]

［51］ Poly(oxyethylene) alkyl (C_{12-15}) ethers

$H_{(2n+1)}C_n$-(O-CH_2-CH_2-)$_m$-OH

(n=12～15、m=1～)

Molecular formula:	$C_{(n+2m)}H_{(2n+4m+1)}O_{(m+1)}$
CAS:	68131-39-5
ENCS:	7-97 etc.
MW:	dependent on the molecule
mp:	dependent on the molecule
bp:	dependent on the molecule
SW:	dependent on the molecule
Specific gravity:	dependent on the molecule
logPow:	dependent on the molecule

［51-1］ Poly(oxyethylene) dodecyl ethers(polymerisation degree = 2-19)

$H_{25}C_{12}$-$(O\text{-}CH_2\text{-}CH_2\text{-})_n$-OH

(n=2～19)

Molecular formula: $C_{(2n+12)}H_{(4n+26)}O_{(n+1)}$
CAS: 9002-92-0
ENCS: 7-97
MW: 274.44(［51-1-1］)～1,023.33(［51-1-18］)
mp: dependent on the molecule
bp: dependent on the molecule
SW: dependent on the molecule
Specific gravity: dependent on the molecule
logPow: dependent on the molecule

［51-1-1］ Di(oxyethylene) dodecyl ether
［51-1-2］ Tri(oxyethylene) dodecyl ether
［51-1-3］ Tetra(oxyethylene) dodecyl ether
［51-1-4］ Penta(oxyethylene) dodecyl ether
［51-1-5］ Hexa(oxyethylene) dodecyl ether
［51-1-6］ Hepta(oxyethylene) dodecyl ether
［51-1-7］ Octa(oxyethylene) dodecyl ether
［51-1-8］ Nona(oxyethylene) dodecyl ether
［51-1-9］ Deca(oxyethylene) dodecyl ether
［51-1-10］ Undeca(oxyethylene) dodecyl ether
［51-1-11］ Dodeca(oxyethylene) dodecyl ether
［51-1-12］ Trideca(oxyethylene) dodecyl ether
［51-1-13］ Tetradeca(oxyethylene) dodecyl ether
［51-1-14］ Pentadeca(oxyethylene) dodecyl ether
［51-1-15］ Hexadeca(oxyethylene) dodecyl ether
［51-1-16］ Heptadeca(oxyethylene) dodecyl ether
［51-1-17］ Octadeca(oxyethylene) dodecyl ether
［51-1-18］ Nonadeca(oxyethylene) dodecyl ether

［51-2］ Poly(oxyethylene) tridecyl ethers(polymerisation degree = 2-19)

$H_{27}C_{13}$-$(O\text{-}CH_2\text{-}CH_2\text{-})_n$-OH

(n=2～19)

Molecular formula: $C_{(2n+13)}H_{(4n+28)}O_{(n+1)}$
CAS: 24938-91-8
ENCS: Uncertain
MW: 204.18 (［51-2-1］)～1,037.36 (［51-2-18］)
mp: dependent on the molecule
bp: dependent on the molecule
SW: dependent on the molecule
Specific gravity: dependent on the molecule
logPow: dependent on the molecule

［51-2-1］ Di(oxyethylene) tridecyl ether
［51-2-2］ Tri(oxyethylene) tridecyl ether
［51-2-3］ Tetra(oxyethylene) tridecyl ether
［51-2-4］ Penta(oxyethylene) tridecyl ether
［51-2-5］ Hexa(oxyethylene) tridecyl ether
［51-2-6］ Hepta(oxyethylene) tridecyl ether
［51-2-7］ Octa(oxyethylene) tridecyl ether
［51-2-8］ Nona(oxyethylene) tridecyl ether
［51-2-9］ Deca(oxyethylene) tridecyl ether
［51-2-10］ Undeca(oxyethylene) tridecyl ether
［51-2-11］ Dodeca(oxyethylene) tridecyl ether
［51-2-12］ Trideca(oxyethylene) tridecyl ether
［51-2-13］ Tetradeca(oxyethylene) tridecyl ether
［51-2-14］ Pentadeca(oxyethylene) tridecyl ether
［51-2-15］ Hexadeca(oxyethylene) tridecyl ether
［51-2-16］ Heptadeca(oxyethylene) tridecyl ether
［51-2-17］ Octadeca(oxyethylene) tridecyl ether
［51-2-18］ Nonadeca(oxyethylene) tridecyl ether

［51-3］ Poly(oxyethylene) tetradecyl ethers(polymerisation degree = 2-19)

$H_{29}C_{14}$-$(O\text{-}CH_2\text{-}CH_2\text{-})_n$-OH

(n=2～19)

Molecular formula: $C_{(2n+14)}H_{(4n+30)}O_{(n+1)}$
CAS: 27306-79-2
ENCS: Uncertain
MW: 302.49 (［51-3-1］)～ 1,051.39 (［51-3-18］)
mp: dependent on the molecule
bp: dependent on the molecule
SW: dependent on the molecule
Specific gravity: dependent on the molecule
logPow: dependent on the molecule

［51-3-1］ Di(oxyethylene) tetradecyl ether
［51-3-2］ Tri(oxyethylene) tetradecyl ether
［51-3-3］ Tetra(oxyethylene) tetradecyl ether
［51-3-4］ Penta(oxyethylene) tetradecyl ether
［51-3-5］ Hexa(oxyethylene) tetradecyl ether
［51-3-6］ Hepta(oxyethylene) tetradecyl ether
［51-3-7］ Octa(oxyethylene) tetradecyl ether
［51-3-8］ Nona(oxyethylene) tetradecyl ether
［51-3-9］ Deca(oxyethylene) tetradecyl ether
［51-3-10］ Undeca(oxyethylene) tetradecyl ether
［51-3-11］ Dodeca(oxyethylene) tetradecyl ether
［51-3-12］ Trideca(oxyethylene) tetradecyl ether
［51-3-13］ Tetradeca(oxyethylene) tetradecyl ether
［51-3-14］ Pentadeca(oxyethylene) tetradecyl ether
［51-3-15］ Hexadeca(oxyethylene) tetradecyl ether
［51-3-16］ Heptadeca(oxyethylene) tetradecyl ether
［51-3-17］ Octadeca(oxyethylene) tetradecyl ether
［51-3-18］ Nonadeca(oxyethylene) tetradecyl ether

［51-4］ Poly(oxyethylene) pentadecyl ethers(polymerisation degree = 2-19)

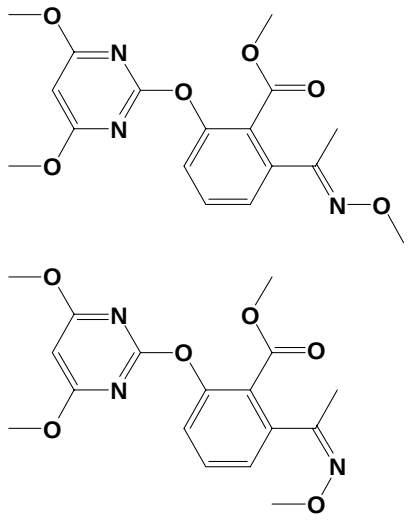
$H_{31}C_{15}$-$(O\text{-}CH_2\text{-}CH_2\text{-})_n$-OH

(n=2～19)

Molecular formula: $C_{(2n+15)}H_{(4n+32)}O_{(n+1)}$
CAS: 34398-05-5
ENCS: Uncertain
MW: 316.52 (［51-4-1］)～ 1,065.41 (［51-4-18］)
mp: dependent on the molecule
bp: dependent on the molecule
SW: dependent on the molecule
Specific gravity: dependent on the molecule
logPow: dependent on the molecule

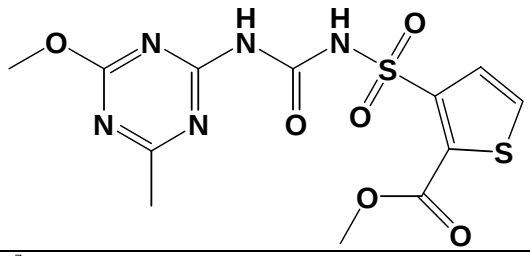
［51-4-1］ Di(oxyethylene) pentadecyl ether
［51-4-2］ Tri(oxyethylene) pentadecyl ether
［51-4-3］ Tetra(oxyethylene) pentadecyl ether
［51-4-4］ Penta(oxyethylene) pentadecyl ether
［51-4-5］ Hexa(oxyethylene) pentadecyl ether
［51-4-6］ Hepta(oxyethylene) pentadecyl ether
［51-4-7］ Octa(oxyethylene) pentadecyl ether
［51-4-8］ Nona(oxyethylene) pentadecyl ether
［51-4-9］ Deca(oxyethylene) pentadecyl ether
［51-4-10］ Undeca(oxyethylene) pentadecyl ether
［51-4-11］ Dodeca(oxyethylene) pentadecyl ether
［51-4-12］ Trideca(oxyethylene) pentadecyl ether
［51-4-13］ Tetradeca(oxyethylene) pentadecyl ether
［51-4-14］ Pentadeca(oxyethylene) pentadecyl ether
［51-4-15］ Hexadeca(oxyethylene) pentadecyl ether
［51-4-16］ Heptadeca(oxyethylene) pentadecyl ether
［51-4-17］ Octadeca(oxyethylene) pentadecyl ether
［51-4-18］ Nonadeca(oxyethylene) pentadecyl ether

［52］ Methyl 2-(4,6-dimethoxy-2-pyrimizinyloxy)-6-[1-(methoxyimino)ethyl]benzoate (synonym: Pyriminobac-methyl)



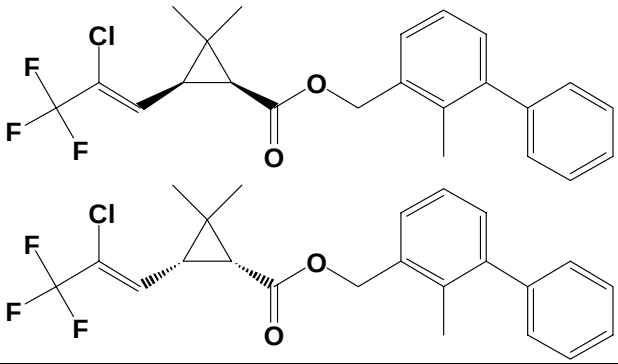
Molecular formula:	$C_{17}H_{20}N_3O_6$
CAS:	136191-64-5
ENCS:	Uncertain
MW:	362.36
mp:	107°C[8)]
bp:	Uncertain
SW:	90mg/L (20°C)[8)]
Specific gravity:	Uncertain
logPow:	2.84[8)]

［53］ Methyl 3-(4-methoxy-6-methyl-1,3,5-triazine-2-ylcarbamoylsulfamoyl)-2-thenoate (synonym: Thifensulfuron methyl)



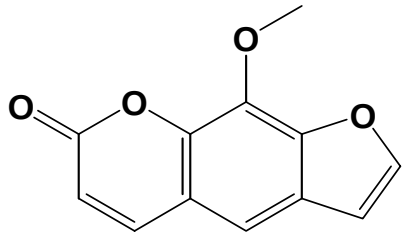
Molecular formula:	$C_{12}H_{13}N_5O_6S_2$
CAS:	79277-27-3
ENCS:	Uncertain
MW:	387.39
mp:	186°C[1)]
bp:	Uncertain
SW:	230mg/L (25°C)[8)]
Specific gravity:	1.58[8)]
logPow:	1.56[28)]

［54］ 2-Methyl-1,1'-biphenyl-3-ylmethyl (*Z*)-3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropanecarboxylate (synonym: Bifenthrin)



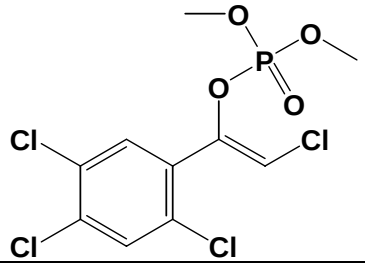
Molecular formula:	$C_{23}H_{22}ClF_3O_2$
CAS:	82657-04-3
ENCS:	4-1701
MW:	422.87
mp:	69°C[1)]
bp:	Uncertain
SW:	0.1mg/L[8)]
Specific gravity:	1.21 (25°C)[1)]
logPow:	>6[2)]

［55］ 9-Methoxy-7*H*-furo[3,2-*g*][1]benzopyran-7-one (synonym: Methoxsalen)



Molecular formula:	$C_{12}H_8O_4$
CAS:	298-81-7
ENCS:	9-2281
MW:	216.19
mp:	148°C[3)]
bp:	Uncertain
SW:	47.6mg/L (30°C)[7)]
Specific gravity:	Uncertain
logPow:	2.14[6)]

［56］ (*Z*)-2-Chloro-1-(2,4,5-trichlorophenyl)vinyl dimethyl phosphate (synonym: Tetrachlorvinphos or CVMP)



Molecular formula:	$C_{10}H_9Cl_4OP_4$
CAS:	22248-79-9
ENCS:	Uncertain
MW:	410.88
mp:	97～98℃[1)]
bp:	Uncertain
SW:	11mg/L (20℃)[7)]
Specific gravity:	Uncertain
logPow:	3.53[2)]

References

1) O'Neil, The Merck Index - An Encyclopedia of Chemicals, Drugs, and Biologicals 13th Edition, Merck Co. Inc. (2001)
2) Hansch et al., Exploring QSAR - Hydrophobic, Electronic and Steric Constants, American Chemical Society (1995)
3) Lide, CRC Handbook of Chemistry and Physics, 81st Edition, CRC Press LLC (2005)
4) Chemicals Inspection and Testing Institute, Biodegradation and bioaccumulation data of existing chemicals based on the CSCL Japan, Japan Chemical Industry Ecology - Toxicology and Information Center (1992)
5) Lewis, Hawley's Condensed Chemical Dictionary 13th Edition, John Wiley & Sons (1997)
6) Meylan et al., Atom/fragment contribution method for estimating octanol-water partition coefficients, Journal of Pharmacological Sciences, 84, 83-92 (1995)
7) Yalkowsky et al., Aquasol Database of Aqueous Solubility Version 5, College of Pharmacy, University of Arizona (1992)
8) Tomlin, The Pesticide Manual 13th Edition, The British Crop Protection Council (2004-2005)
9) Kala et al., Untersuchungen zur Polymorphie von Arzneistoffen in Pulvern und Tabletten. II: Röntgendiffraktometrische Untersuchungen polymorpher Modiffikationen des Phenobarbitals, Pharmazie, 41, 291-292 (1986)
10) Sax, Dangerous Properties of Industrial Materials Volumes 1-3 7th Edition, Van Nostrand Reinhold (1989)
11) Riddick et al., Techniques of Chemistry 4th Edition, John Wiley & Sons (1985-1986)
12) Seidell, Solubilities of Organic Compounds, Van Nostrand Reinhold Co. (1941)
13) Wollmann et al., Zur Bestimmung der polaritat von Arzneistoffen, Pharmazie, 29, 708-711 (1974)
14) Nakagawa et al., Analysis and Prediction of Hydrophobicity Parameters of Substituted Acetanilides, Benzamides and Related Aromatic Compounds, Environmental Toxicological Chemistry, 11, 901-916 (1992)
15) Bogyo et al., Investigation of selected potential environmental contaminants: Epoxides, USEPA-560/11-88-005 (1980)
16) Wauchope et al., The SCS/ARD/CES pesticides properties database for environmental decision-making, Reviews of Environmental Contamination and Toxicology, 123, 1-36 (1991)
17) Howard et al., Handbook of Physical Properties of Organic Chemicals, CRC Press Inc. (1997)
18) Shiu et al., Solubilities of pesticide chemicals in water Part II: data compilation, Reviews of Environmental Contamination and Toxicology, 116, 15-187 (1990)
19) Meylan et al., Improved method for estimating water solubility from octanol/water partition coefficient, Environmental Toxicological Chemistry, 15, 100-106 (1996)
20) Kirk-Othmer, Encyclopedia of Chemical Technology 5th Edition, John Wiley & Sons (2004)
21) Horvath et al., IUPAC-NIST solubility data series 67. Halogenated ethanes and ethenes with water, Journal of Physical and Chemical Reference Data, 128, 395-623 (1999)
22) Phelan et al., Phase partitioning of TNT and DNT in soils, Sandia Report, SAND2001-0310, Sandia National Laboratories (2001)
23) Verschueren, Handbook of Environmental Data of Organic Chemicals 2nd Edition, Van Nostrand Reinhold Co. (1983)
24) Sangster, LOGKOW Databook, Sangster Research Laboratory (1994)
25) International Agency for Research on Cancer (IARC), IARC Monographs, 48, 45 (1990)
26) Bingham et al, Patty's Toxicology Volumes 1-9, 5th Edition, John Wiley Sons (2001)
27) Ohnishi et al., A new method of solubility determination of hydrolyzing solute - Solubility of benzyl chloride in water, Bulletin of the Chemical Society of Japan, 44, 2647-2649 (1971)
28) Hay, Chemistry of sulfonylurea herbicides, Pesticide. Science, 29, 247-61 (1990)

3. Surveyed site and procedure

In the Initial Environmental Survey, the sampling and analysis of specimens was entrusted to prefectural governments and government-designated cities across Japan, and some specimens were anaylized by private analytical laboratories.

(1) Organisations responsible for sampling

Local communities	Organisations responsible for sampling	Surveyed media			
		Surface water	Sediment	Wildlife	Air
Hokkaido	Hokkaido Institute of Environmental Sciences	○	○		○
Sapporo City	Sapporo City Institute of Public Health	○			
Iwate Pref.	Research Institute for Environmental Sciences and Public Health of Iwate Prefecture	○			
Sendai City	Sendai City Institute of Public Health	○			○
Ibaraki Pref.	Ibaraki Kasumigaura Environmental Science Center	○			
Tochigi Pref.	Tochigi Prefectural Institute of Public Health and Environmental Science	○			
Gumma Pref	Gunma Prefectural Institute of Public Health and Environmental Sciences	○			
Saitama Pref.	Center for Environmental Science in Saitama	○			○
Chiba Pref.	Chiba Prefectural Environmental Research Center	○			○
Tokyo	Tokyo Metropolitan Research Institute for Environmental Protection			○	
Kanagawa Pref.	Kanagawa Environmental Research Center				○
Yokohama City	Yokohama Environmental Science Research Institute	○			
Kawasaki City	Kawasaki Municipal Research Institute for Environmental Protection	○	○		
Niigata Pref.	Niigata Prefectural Institute of Public Health and Environmental Sciences	○	○		
Ishikawa Pref.	Ishikawa Prefectural Institute of Public Health and Environmental Science	○	○		
Nagano Pref.	Nagano Environmental Conservation Research Institute	○			
Aichi Pref.	Aichi Environmental Research Center	○		○	
Nagoya City	Nagoya City Environmental Science Research Institute	○			○
Mie Pref.	Mie Prefectural Science and Technology Promotion Center	○			
Shiga Pref.	Lake Biwa Environmental Research Institute	○			
Kyoto Pref.	Kyoto Prefectural Institute of Public Health and Environment	○			○
Kyoto City	Kyoto City Institute of Health and Environmental Sciences	○			○
Osaka Pref.	Osaka Prefecture Environmental Pollution Control Center	○		○	○
Osaka City	Osaka City Institute of Public Health and Environmental Sciences	○	○		
Hyogo Pref.	Hyogo Prefectural Institute of Public Health and Environmental Sciences	○			○
Kobe City	Environmental Conservation and Guidance Division, Environment Bureau	○			
Wakayama Pref.	Wakayama Prefectural Research Center of Environment and Public Health	○			○
Okayama Pref.	Okayama Prefectural Institute for Environmental Science and Public Health	○			
Hiroshima City	Hiroshima Prefectural Institute of Public Health and Environment	○			
Yamaguchi Pref.	Yamaguchi Prefectural Institute of Public Health and Environment	○	○	○	○
Kagawa Pref.	Kagawa Prefectural Research Institute for Environmental Sciences and Public Health	○			○
Fukuoka Pref.	Fukuoka Institute of Health and Environmental Science	○			○
Kitakyushu City	Kitakyushu City Institute of Environmental Sciences	○	○		○
Tokushima Pref.	Fukuoka City Institute for Hygiene and the Environment	○			
Saga Pref.	Saga Prefectural Environmental Research Center	○			

(Note) Organisations responsible for sampling are described by their official names in FY 2006.

(2) Surveyed sites (or areas) and target chemicals

Surveyed sites and target chemicals for surface water are shown in Table 1-1-1 and Figure 1-1-1. Surveyed sites and target chemicals for sediment are shown in Table 1-1-2 and Figure 1-1-1. Surveyed areas and target chemicals for wildlife are shown in Table 1-1-3 and Figure 1-1-2. Surveyed sites and target chemicals for air are shown in Table 1-1-4 and Figure 1-1-3. The breakdown is summarized as follows.

Surveyed media	Numbers of local communities	Numbers of target chemicals (groups)	Numbers of surveyed sites (or areas)	Numbers of samples at a surveyed site (or area)
Surface water	33	49	48	3
Sediment	7	6	11	3
Wildlife	4	1	5	3
Air	15	28	18	3

Table 1-1-1 (1/4) List of surveyed sites (surface water) and target chemicals in the Initial Environmental Survey in FY 2006

Local communities	Surveyed sites	Target chemicals												
		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[14]
Hokkaido	Ishikarikakokyo Bridge, Mouth of Riv. Ishikari (Ishikari City)	○							○					
	Tomakomai Port	○												
Sapporo City	Azuma-bashi Bridge, Riv. Toyohira (Sapporo city)													
Iwate Pref.	Riv. Toyosawa (Hanamaki City)									○				
Sendai City	Hirose-ohashi Bridge, Riv. Hirose (Sendai City)					○								
Ibaraki Pref.	Katta-bashi Bridge, Riv. Naka (Hitachinaka City)		○	○	○		○	○	○	○	○		○	
	Tonekamome-ohasi Bridge, Mouth of Riv. Tone (Kamisu City)		○	○	○		○	○	○	○	○		○	
Tochigi Pref.	Riv. Tagawa (Utsunomiya City)								○					
Gunma Pref.	Tako-bashi Bridge, Riv. Kabura (Yoshii Town)			○				○						
Saitama Pref.	Teshiro-shinbashi Bridge, Riv. Ayase (Soka City)													
	Shiki-ohasi Bridge, Riv. Yanase (Shiki City)									○				○
	Asahi-bashi Bridge, Riv. Shingashi (Kawagoe City)									○				○
	Kachi-hashi Bridge, Riv. Ichino (Yoshimi Town)									○				○
Chiba Pref.	Asai-bashi Bridge, Riv. Yourou (Ichihara City)									○				
Yokohama City	Kamenoko-bashi Bridge, Riv. Tsurumi (Yokohama City)					○	○							
Kawasaki City	Mouth of Riv. Tama (Kawasaki City)	○											○	
	Keihin Canal, Port of Kawasaki	○											○	
	Chidori Canal, Port of Kawasaki										○			
Niigata Pref.	Lower Riv. Shinano (Niigata City)													
Ishikawa Pref.	Mouth of Riv. Sai (Kanazawa City)				○				○					
Nagano Pref.	Lake Suwa (center)													
Aichi Pref.	Nagoya Port						○		○			○		
Nagoya City	Minatoshinbashi Bridge, Riv. Hori (Nagoya City)													
Mie Pref.	Yokkaichi Port		○						○					
	Yagami-bashi Bridge, Riv Tsuge (Iga City)										○			
Shiga Pref.	Lake Biwa (center, offshore of Minamihira)											○		
Kyoto Pref.	Miyazu Port				○									
Kyoto City	Miyamae Bridge, Riv. Katsura (Kyoto City)						○		○	○				
Osaka Pref.	Mouth of Riv. Yamato (Sakai City)					○								
Osaka City	Kema-bashi Bridge, Riv. Oh-kawa (Osaka City)	○					○			○		○		
	Osaka Port	○					○			○		○		
Hyogo Pref.	Kamisho-bashi Bridge, Riv. Kakogawa (Kakogawa City)													
	Aho-bashi Bridge, Riv. Ichikawa													
	Offshore of Himeji													
Kobe City	Kobe Port (center)													○
Wakayama Pref.	Kinokawa-ohashi Bridge, Mouth of Riv. Kinokawa (Wakayama City)		○			○	○		○	○		○		
Okayama Pref.	Offshore of Mizushima									○				○
Hiroshima Pref.	Kohama Port										○			
	Offshore of Edashima			○				○						
Yamaguchi Pref.	Tokuyama Bay		○		○	○								
	Offshore of Hagi		○		○	○								
Kagawa Pref.	Takamatsu Port			○	○			○	○		○			

Local communities	Surveyed sites	Target chemicals												
		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[14]
Fukuoka Pref.	Kabura-bashi Bridge, River Raizan (Maebaru City)									○				○
	Offshore of Omuta									○				○
Kitakyushu City	Kanmon Strait		○											
	Dokai Bay		○											
Fukuoka City	Hakata Bay									○			○	
Saga Pref.	Imari Bay								○					

[1] Adipic acid, [2] 3'-Amino-4'-methoxyacetanilide, [3] 4-Allyl-1,2-dimethoxybenzene, [4] Anthraquinone, [5] Indium and its compounds (as Indium), [6] *O*-Ethyl *O*-2-(isopropoxycarbonyl)phenyl *N*-isopropylphosphoramidothioate (synonym: Isofenphos), [7] *S*-Ethyl 2-(4-chloro-2-methylphenoxy)thioacetate (synonym: Phenothiol or MCPA-thioethyl),
[8] 2-Ethylamino-4-isopropylamino-6-methylthio-1,3,5-triazine (synonym: Ametryn),
[9] 5-Ethyl-5-phenyl-2,4,6(1*H*,3*H*,5*H*)-pyrimidinetrione (synonym: Phenobarbital), [10] Ethyleneimine, [11] 4'-Ethoxyacetanilide (synonym: Phenacetin), [12] 1,2-Epoxybutane,
[14] 5-Chloro-*N*-{2-[4-(2-ethoxyethyl)-2,3-dimethylphenoxy]ethyl}-6-ethylpyrimidine-4-amine (synonym: Pylimidifen)

Table 1-1-1 (2/4) List of surveyed sites (surface water) and target chemicals in the Initial Environmental Survey in FY 2006

Local communities	Surveyed sites	Target chemicals										
		[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]
Hokkaido	Ishikarikakokyo Bridge, Mouth of Riv. Ishikari (Ishikari City)				○	○			○			
	Tomakomai Port											
Sapporo City	Azuma-bashi Bridge, Riv. Toyohira (Sapporo city)											
Iwate Pref.	Riv. Toyosawa (Hanamaki City)											
Sendai City	Hirose-ohashi Bridge, Riv. Hirose (Sendai City)											
Ibaraki Pref.	Katta-bashi Bridge, Riv. Naka (Hitachinaka City)	○		○			○	○		○	○	○
	Tonekamome-ohasi Bridge, Mouth of Riv. Tone (Kamisu City)	○		○			○	○		○	○	○
Tochigi Pref.	Riv. Tagawa (Utsunomiya City)							○				
Gunma Pref.	Tako-bashi Bridge, Riv. Kabura (Yoshii Town)											
Saitama Pref.	Teshiro-shinbashi Bridge, Riv. Ayase (Soka City)											
	Shiki-ohasi Bridge, Riv. Yanase (Shiki City)											
	Asahi-bashi Bridge, Riv. Shingashi (Kawagoe City)											
	Kachi-hashi Bridge, Riv. Ichino (Yoshimi Town)											
Chiba Pref.	Asai-bashi Bridge, Riv. Yourou (Ichihara City)									○		
Yokohama City	Kamenoko-bashi Bridge, Riv. Tsurumi (Yokohama City)	○		○						○	○	○
Kawasaki City	Mouth of Riv. Tama (Kawasaki City)		○						○			
	Keihin Canal, Port of Kawasaki		○						○			
	Chidori Canal, Port of Kawasaki											
Niigata Pref.	Lower Riv. Shinano (Niigata City)											
Ishikawa Pref.	Mouth of Riv. Sai (Kanazawa City)							○				
Nagano Pref.	Lake Suwa (center)											
Aichi Pref.	Nagoya Port	○						○				
Nagoya City	Minatoshinbashi Bridge, Riv. Hori (Nagoya City)										○	
Mie Pref.	Yokkaichi Port		○		○							
	Yagami-bashi Bridge, Riv Tsuge (Iga City)											
Shiga Pref.	Lake Biwa (center, offshore of Minamihira)											
Kyoto Pref.	Miyazu Port											
Kyoto City	Miyamae Bridge, Riv. Katsura (Kyoto City)	○						○				
Osaka Pref.	Mouth of Riv. Yamato (Sakai City)											
Osaka City	Kema-bashi Bridge, Riv. Oh-kawa (Osaka City)	○			○	○	○	○		○		
	Osaka Port	○			○	○						
Hyogo Pref.	Kamisho-bashi Bridge, Riv. Kakogawa (Kakogawa City)							○				
	Aho-bashi Bridge, Riv. Ichikawa											
	Offshore of Himeji											
Kobe City	Kobe Port (center)										○	
Wakayama Pref.	Kinokawa-ohashi Bridge, Mouth of Riv. Kinokawa (Wakayama City)	○		○	○		○	○				
Okayama Pref.	Offshore of Mizushima									○		○
Hiroshima Pref.	Kohama Port		○									
	Offshore of Edashima											

Local communities	Surveyed sites	Target chemicals										
		[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]
Yamaguchi Pref.	Tokuyama Bay					○			○			
	Offshore of Hagi					○			○			
Kagawa Pref.	Takamatsu Port		○				○	○				
Fukuoka Pref.	Kabura-bashi Bridge, River Raizan (Maebaru City)											○
	Offshore of Omuta											○
Kitakyushu City	Kanmon Strait											
	Dokai Bay											
Fukuoka City	Hakata Bay											
Saga Pref.	Imari Bay			○				○				

[15] 2-(4-Chloro-6-ethylamino-1,3,5-triazine-2-yl)amino-2-methylpropiononitrile (synonym: Cyanazine),
[16] Chlorotrifluoromethane (synonym: CFC-13), [17] *O*-6-Chloro-3-phenyl-4-pyridazinyl *S*-*n*-octyl thiocarbonate (synonym: Pyridate), [18] 2-Chloropropionic acid, [19] 1-Chloro-2-methylpropene, [20] *α*-Cyano-3-phenoxybenzyl 2,2-dichloro-1-(4-ethoxyphenyl)cyclopropanecarboxylate (synonym: Cycloprothrin),
[21] [1*α*(*S**),3*α*]-(±)-Cyano(3-phenoxyphenyl)methyl 3-(2,2-dichloroethenyl)-2,2-dimethylcyclopropanecarboxylate (synonym: α-Cypermethrin), [22] Cyclohexanone,
[23] 1-(3,5-Dichloro-2,4-difluorophenyl)-3-(2,6-difluorobenzoyl)urea (synonym: Teflubenzuron),
[24] 2,4'-Dichloro-α-(5-pyrimidinyl)benzhydryl alcohol (synonym: Fenarimol),
[25] 2-(2,4-Dichlorophenyl)-1-(1*H*-1,2,4-triazol-1-yl)-2-hexanol (synonym: Hexaconazole)

Table 1-1-1 (3/4) List of surveyed sites (surface water) and target chemicals in the Initial Environmental Survey in FY 2006

Local communities	Surveyed sites	Target chemicals														
		[26]	[28]	[29]	[30]	[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[41]	[42]
Hokkaido	Ishikarikakokyo Bridge, Mouth of Riv. Ishikari (Ishikari City)	○			○		○	○								
	Tomakomai Port															
Sapporo City	Azuma-bashi Bridge, Riv. Toyohira (Sapporo city)					○					○					
Iwate Pref.	Riv. Toyosawa (Hanamaki City)			○												
Sendai City	Hirose-ohashi Bridge, Riv. Hirose (Sendai City)								○				○			
Ibaraki Pref.	Katta-bashi Bridge, Riv. Naka (Hitachinaka City)		○	○		○				○	○	○		○	○	○
	Tonekamome-ohasi Bridge, Mouth of Riv. Tone (Kamisu City)		○	○		○				○	○	○		○	○	○
Tochigi Pref.	Riv. Tagawa (Utsunomiya City)									○		○				
Gunma Pref.	Tako-bashi Bridge, Riv. Kabura (Yoshii Town)													○		
Saitama Pref.	Teshiro-shinbashi Bridge, Riv. Ayase (Soka City)				○											
	Shiki-ohasi Bridge, Riv. Yanase (Shiki City)															
	Asahi-bashi Bridge, Riv. Shingashi (Kawagoe City)															
	Kachi-hashi Bridge, Riv. Ichino (Yoshimi Town)															
Chiba Pref.	Asai-bashi Bridge, Riv. Yourou (Ichihara City)															
Yokohama City	Kamenoko-bashi Bridge, Riv. Tsurumi (Yokohama City)		○				○	○	○				○		○	
Kawasaki City	Mouth of Riv. Tama (Kawasaki City)															
	Keihin Canal, Port of Kawasaki															
	Chidori Canal, Port of Kawasaki				○											
Niigata Pref.	Lower Riv. Shinano (Niigata City)															
Ishikawa Pref.	Mouth of Riv. Sai (Kanazawa City)									○		○				
Nagano Pref.	Lake Suwa (center)															
Aichi Pref.	Nagoya Port				○					○		○				
Nagoya City	Minatoshinbashi Bridge, Riv. Hori (Nagoya City)															
Mie Pref.	Yokkaichi Port			○		○				○	○					
	Yagami-bashi Bridge, Riv Tsuge (Iga City)															
Shiga Pref.	Lake Biwa (center, offshore of Minamihira)															
Kyoto Pref.	Miyazu Port															
Kyoto City	Miyamae Bridge, Riv. Katsura (Kyoto City)			○			○	○		○		○	○			
Osaka Pref.	Mouth of Riv. Yamato (Sakai City)								○				○			
Osaka City	Kema-bashi Bridge, Riv. Oh-kawa (Osaka City)			○											○	
	Osaka Port			○											○	
Hyogo Pref.	Kamisho-bashi Bridge, Riv. Kakogawa (Kakogawa City)									○						
	Aho-bashi Bridge, Riv. Ichikawa				○											
	Offshore of Himeji															
Kobe City	Kobe Port (center)															
Wakayama Pref.	Kinokawa-ohashi Bridge, Mouth of Riv. Kinokawa (Wakayama City)		○				○	○		○		○				○

Local communities	Surveyed sites	Target chemicals														
		[26]	[28]	[29]	[30]	[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[41]	[42]
Okayama Pref.	Offshore of Mizushima															○
Hiroshima Pref.	Kohama Port															
	Offshore of Edashima													○		
Yamaguchi Pref.	Tokuyama Bay	○		○					○				○			○
	Offshore of Hagi	○		○					○				○			○
Kagawa Pref.	Takamatsu Port		○							○		○		○		
Fukuoka Pref.	Kabura-bashi Bridge, River Raizan (Maebaru City)															○
	Offshore of Omuta															○
Kitakyushu City	Kanmon Strait	○		○												
	Dokai Bay	○		○												
Fukuoka City	Hakata Bay			○		○			○		○					
Saga Pref.	Imari Bay						○	○		○		○				

[26] Dichlorobromomethane, [28] Divinylbenzene, [29] 5,5-Diphenyl-2,4-imidazolidinedione (synonym: Phenytoin), [30] 2-(Di-*n*-butylamino)ethanol, [31] Dibromotetrafluoroethane (synonym: Halon-2402), [32] 1,4-Dibromobutane, [33] 1,3-Dibromopropane, [34] Thallium and its compounds (as Thallium), [35] *O,O*-Diethyl *O*-2-quinoxalinyl phosphorothioate (synonym: Quinalphos), [36] Tetrachlorodifluoroethane (synonym: CFC-112), [37] 2,3,5,6-Tetrafluoro-4-methylbenzyl (*Z*)-3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropanecarboxylate (synonym: Tefluthrin), [38] Tellurium and its compounds (as Tellurium), [39] 2,4,6-Trinitrotoluene, [41] 1-*tert*-Butyl-3-(2,6-diisopropyl-4-phenoxyphenyl)thiourea (synonym: Diafenthiuron), [42] *N*-Propyl-*N*-[2-(2,4,6-trichlorophenoxy)ethyl]imidazole-1-carboxamide (synonym: Prochloraz)

Table 1-1-1 (4/4) List of surveyed sites (surface water) and target chemicals in the Initial Environmental Survey in FY 2006

Local communities	Surveyed sites	Target chemicals									
		[43]	[44]	[45]	[46]	[47]	[50]	[52]	[53]	[55]	[56]
Hokkaido	Ishikarikakokyo Bridge, Mouth of Riv. Ishikari (Ishikari City)			○		○		○			
	Tomakomai Port										
Sapporo City	Azuma-bashi Bridge, Riv. Toyohira (Sapporo city)	○									
Iwate Pref.	Riv. Toyosawa (Hanamaki City)										
Sendai City	Hirose-ohashi Bridge, Riv. Hirose (Sendai City)										
Ibaraki Pref.	Katta-bashi Bridge, Riv. Naka (Hitachinaka City)	○	○		○	○		○	○	○	○
	Tonekamome-ohasi Bridge, Mouth of Riv. Tone (Kamisu City)	○	○		○	○		○	○	○	○
Tochigi Pref.	Riv. Tagawa (Utsunomiya City)		○								
Gunma Pref.	Tako-bashi Bridge, Riv. Kabura (Yoshii Town)										
Saitama Pref.	Teshiro-shinbashi Bridge, Riv. Ayase (Soka City)										
	Shiki-ohasi Bridge, Riv. Yanase (Shiki City)										
	Asahi-bashi Bridge, Riv. Shingashi (Kawagoe City)										
	Kachi-hashi Bridge, Riv. Ichino (Yoshimi Town)										
Chiba Pref.	Asai-bashi Bridge, Riv. Yourou (Ichihara City)										
Yokohama City	Kamenoko-bashi Bridge, Riv. Tsurumi (Yokohama City)			○				○			○
Kawasaki City	Mouth of Riv. Tama (Kawasaki City)						○			○	
	Keihin Canal, Port of Kawasaki						○			○	
	Chidori Canal, Port of Kawasaki										
Niigata Pref.	Lower Riv. Shinano (Niigata City)									○	
Ishikawa Pref.	Mouth of Riv. Sai (Kanazawa City)		○				○	○		○	
Nagano Pref.	Lake Suwa (center)									○	
Aichi Pref.	Nagoya Port		○					○			○
Nagoya City	Minatoshinbashi Bridge, Riv. Hori (Nagoya City)										
Mie Pref.	Yokkaichi Port	○	○		○			○			
	Yagami-bashi Bridge, Riv Tsuge (Iga City)										
Shiga Pref.	Lake Biwa (center, offshore of Minamihira)										
Kyoto Pref.	Miyazu Port									○	
Kyoto City	Miyamae Bridge, Riv. Katsura (Kyoto City)		○	○				○			○
Osaka Pref.	Mouth of Riv. Yamato (Sakai City)										
Osaka City	Kema-bashi Bridge, Riv. Oh-kawa (Osaka City)				○	○	○	○	○		○
	Osaka Port				○	○	○				○
Hyogo Pref.	Kamisho-bashi Bridge, Riv. Kakogawa (Kakogawa City)		○					○			
	Aho-bashi Bridge, Riv. Ichikawa										
	Offshore of Himeji									○	
Kobe City	Kobe Port (center)										
Wakayama Pref.	Kinokawa-ohashi Bridge, Mouth of Riv. Kinokawa (Wakayama City)		○	○				○	○	○	○
Okayama Pref.	Offshore of Mizushima								○		
Hiroshima Pref.	Kohama Port										
	Offshore of Edashima										

Local communities	Surveyed sites	Target chemicals									
		[43]	[44]	[45]	[46]	[47]	[50]	[52]	[53]	[55]	[56]
Yamaguchi Pref.	Tokuyama Bay								○		
	Offshore of Hagi								○		
Kagawa Pref.	Takamatsu Port		○					○		○	
Fukuoka Pref.	Kabura-bashi Bridge, River Raizan (Maebaru City)										
	Offshore of Omuta										
Kitakyushu City	Kanmon Strait									○	
	Dokai Bay									○	
Fukuoka City	Hakata Bay	○									
Saga Pref.	Imari Bay		○	○				○		○	

[43] Bromochlorodifluoromethane (synonym: Halon-1211), [44] 2-(4-Bromodifluoromethoxyphenyl)-2-methylpropyl 3-phenoxybenzyl ether (synonym: Halfenprox), [45] 3-Bromo-1-propene (synonym: Allyl bromide), [46] 1,4,5,6,7,7-Hexachlorobicyclo[2.2.1]-5-heptene-2,3-dicarboxylic acid (synonym: Chlorendic acid), [47] Hexahydro-1,3,5-trinitro-1,3,5-triazine (synonym: Cyclonite), [50] Benzyl alcohol, [52] Methyl 2-(4,6-dimethoxy-2-pyrimizinyloxy)-6-[1-(methoxyimino)ethyl]benzoate (synonym: Pyriminobac-methyl), [53] Methyl 3-(4-methoxy-6-methyl-1,3,5-triazine-2-ylcarbamoylsulfamoyl)-2-thenoate (synonym: Thifensulfuron methyl), [55] 9-Methoxy-7*H*-furo[3,2-*g*][1]benzopyran-7-one (synonym: Methoxsalen), [56] (*Z*)-2-Chloro-1-(2,4,5-trichlorophenyl)vinyl dimethyl phosphate (synonym: Tetrachlorvinphos or CVMP)

Table 1-1-2 List of surveyed sites (sediment) and target chemicals in the Initial Environmental Survey in FY 2006

Local communities	Surveyed sites	Target chemicals					
		[1]	[19]	[22]	[26]	[50]	[51]
Hokkaido	Tomakomai Port	○	○	○	○		
Kawasaki City	Mouth of Riv. Tama (Kawasaki City)	○		○		○	○
	Keihin Canal, Port of Kawasaki	○		○		○	○
Niigata Pref.	Lower Riv. Shinano (Niigata City)						○
Ishikawa Pref.	Mouth of Riv. Sai (Kanazawa City)					○	
Osaka City	Kema-bashi Bridge, Riv. Oh-kawa (Osaka City)	○	○			○	○
	Osaka Port	○	○			○	○
Yamaguchi Pref.	Tokuyama Bay		○	○	○		
	Offshore of Hagi		○	○	○		
Kitakyushu City	Kanmon Strait				○		
	Dokai Bay				○		

[1] Adipic acid, [19] 1-Chloro-2-methylpropene, [22] Cyclohexanone, [26] Dichlorobromomethane, [50] Benzyl alcohol, [51] Poly(oxyethylene) alkyl (C_{12-15}) ethers

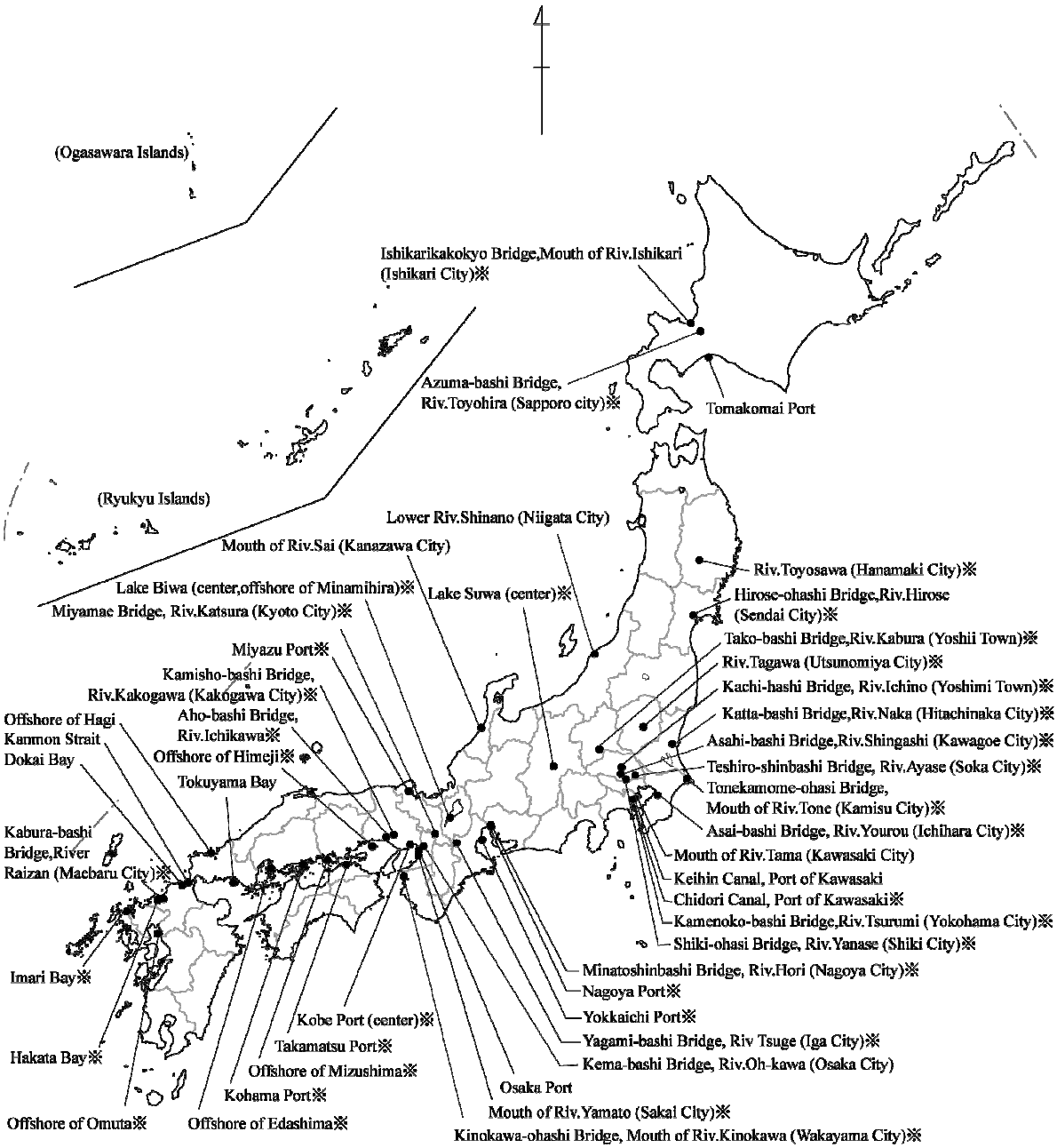


Figure 1-1-1 Surveyed sites (surface water and sediment) in the Initial Environmental Survey in FY 2006

(Note) ※means “surface water only”.

Table 1-1-3 List of surveyed areas (wildlife) and target chemical in the Initial Environmental Survey in FY 2006

Local communities	Surveyed areas	Wildlife species	Target chemical
			[40] Phenanthrene
Tokyo Met.	Tokyo Bay	Sea bass (*Lateolabrax japonicus*)	○
Aichi Pref.	Nagoya Port	Striped mullet (*Mugil cephalus*)	○
Osaka Pref.	Osaka Bay	Sea bass (*Lateolabrax japonicus*)	○
Yamaguchi Pref.	Tokuyama Bay	Striped mullet (*Mugil cephalus*)	○
	Offshore of Hagi	Striped mullet (*Mugil cephalus*)	○

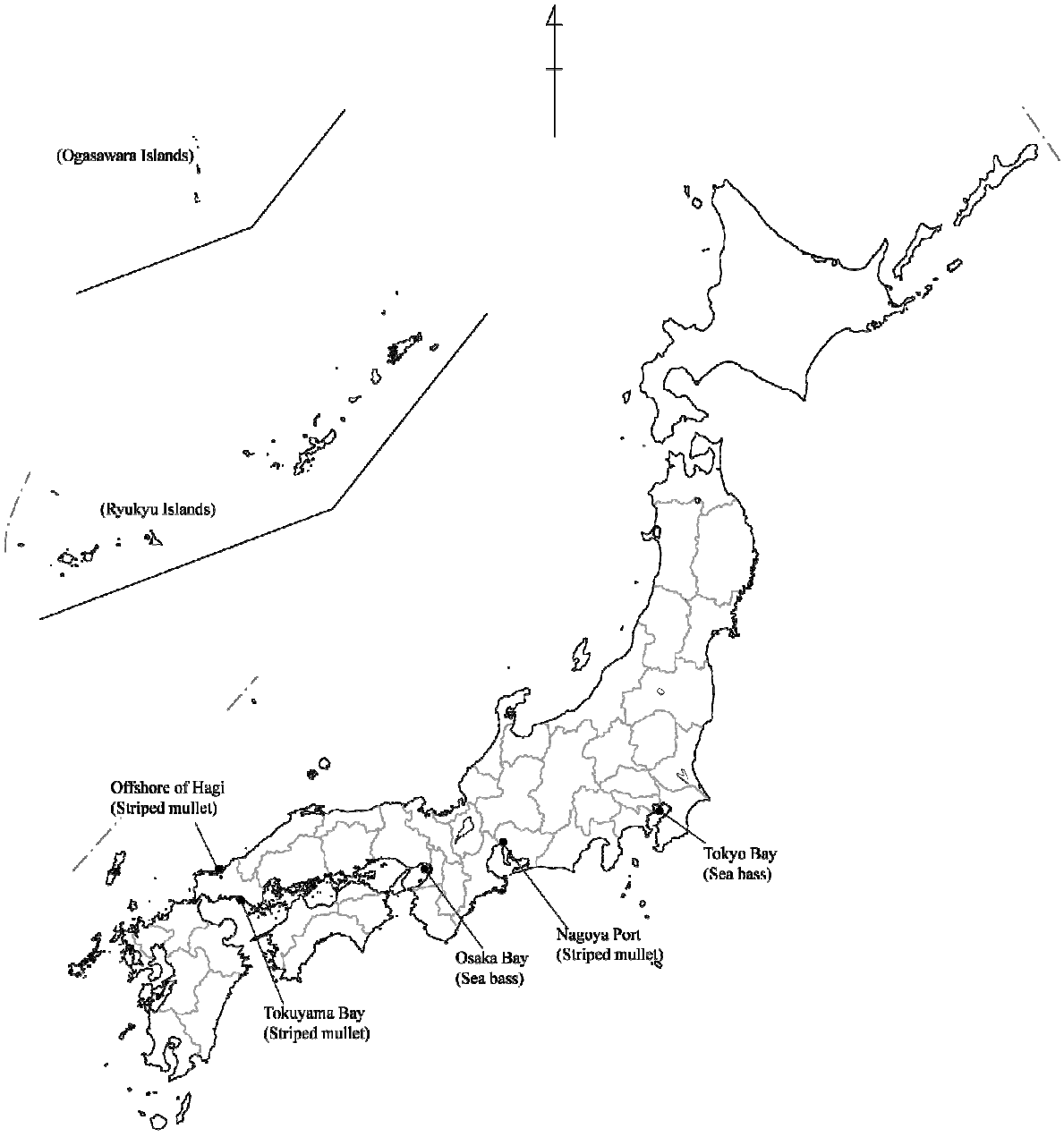


Figure 1-1-2 Surveyed areas (wildlife) in the Initial Environmental Survey in FY 2006

Table 1-1-4 (1/2) List of surveyed sites (air) and target chemicals in the Initial Environmental Survey in FY 2006

Local communities	Surveyed sites	Target chemicals													
		[5]	[7]	[9]	[12]	[13]	[15]	[17]	[18]	[20]	[23]	[24]	[25]	[27]	[30]
Hokkaido	Hokkaido Institute of Environmental Sciences (Sapporo City)														
Sendai City	Tsutsujigaoka Park (Sendai City)				○										
Saitama Pref.	Center for Environmental Science in Saitama (Kisai Town)		○			○									
	Inarikita Park (Soka City)														○
Chiba Pref.	Ichihara-Matsuzaki Air Quality Monitoring Station (Ichihara City)	○									○			○	
Kanagawa Pref.	Kanagawa Environmental Research Center (Hiratsuka City)	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Nagoya City	Chikusa Ward Heiwa Park (Nagoya City)	○	○	○	○		○	○	○	○				○	○
Kyoto Pref.	Kyoto Prefectural Joyo High School (Joyo City)				○										
Kyoto City	Kyoto City Hall (Kyoto City)		○	○		○			○		○	○	○		
Osaka Pref.	Osaka Prefecture Environmental Pollution Control Center (Osaka City)	○					○	○						○	○
Hyogo Pref.	Hyogo Prefectural Institute of Public Health and Environmental Sciences (Kobe City)						○	○	○		○	○	○		
	Himegi Municipal Higashi-Shimin Center (Himeji City)														○
Wakayama Pref.	Wakayama Prefectural Research Center of Environment and Public Health (Wakayama City)						○								
Yamaguchi Pref.	Yamaguchi Prefectural Institute of Public Health and Environment (Yamaguchi City)		○			○				○					
Kagawa Pref.	Takamatsu Joint Prefectural Government Building (Takamatsu City)		○	○	○	○		○			○	○	○		
Fukuoka Pref.	Munakata Prefectural Government Building (Munakata City)									○					
	Omuta City Hall (Omuta City)	○		○					○	○		○	○	○	
Kitakyushu City	Kitatyushu Air Quality Monitoring Station (Kitatyushu City)														

[5] Indium and its compounds (as Indium), [7] *S*-Ethyl 2-(4-chloro-2-methylphenoxy)thioacetate (synonym: Phenothiol or MCPA-thioethyl), [9] 5-Ethyl-5-phenyl-2,4,6(1*H*,3*H*,5*H*)-pyrimidinetrione (synonym: Phenobarbital), [12] 1,2-Epoxybutane, [13] 4-Oxiranyl-1,2-epoxycyclohexane, [15] 2-(4-Chloro-6-ethylamino-1,3,5-triazine-2-yl)amino-2-methylpropiononitrile (synonym: Cyanazine), [17] *O*-6-Chloro-3-phenyl-4-pyridazinyl *S*-*n*-octyl thiocarbonate (synonym: Pyridate), [18] 2-Chloropropionic acid, [20] α-Cyano-3-phenoxybenzyl 2,2-dichloro-1-(4-ethoxyphenyl)cyclopropanecarboxylate (synonym: Cycloprothrin), [23] 1-(3,5-Dichloro-2,4-difluorophenyl)-3-(2,6-difluorobenzoyl)urea (synonym: Teflubenzuron), [24] 2,4'-Dichloro-α-(5-pyrimidinyl)benzhydryl alcohol (synonym: Fenarimol), [25] 2-(2,4-Dichlorophenyl)-1-(1*H*-1,2,4-triazol-1-yl)-2-hexanol (synonym: Hexaconazole), [27] Mixture of 2,4-dinitro-6-octylphenyl crotonate and 2,6-dinitro-4-octylphenyl crotonate (octyl = 1-methylheptyl, 1-ethylhexy or 1-propylpentyl) (synonym: Dinocap or DPC), [30] 2-(Di-*n*-butylamino)ethanol

Table 1-1-4 (2/2) List of surveyed sites (air) and target chemicals in the Initial Environmental Survey in FY 2006

Local communities	Surveyed sites	Target chemicals													
		[34]	[35]	[37]	[38]	[40]	[42]	[46]	[47]	[48]	[49]	[52]	[53]	[54]	[56]
Hokkaido	Hokkaido Institute of Environmental Sciences (Sapporo City)					○									
Sendai City	Tsutsujigaoka Park (Sendai City)									○	○				
Saitama Pref.	Center for Environmental Science in Saitama (Kisai Town)		○	○											
	Inarikita Park (Soka City)														
Chiba Pref.	Ichihara-Matsuzaki Air Quality Monitoring Station (Ichihara City)	○			○	○				○	○				○
Kanagawa Pref.	Kanagawa Environmental Research Center (Hiratsuka City)	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Nagoya City	Chikusa Ward Heiwa Park (Nagoya City)	○	○	○	○		○	○	○			○	○	○	○
Kyoto Pref.	Kyoto Prefectural Joyo High School (Joyo City)														
Kyoto City	Kyoto City Hall (Kyoto City)		○	○			○	○	○	○	○	○	○	○	
Osaka Pref.	Osaka Prefecture Environmental Pollution Control Center (Osaka City)	○			○										
Hyogo Pref.	Hyogo Prefectural Institute of Public Health and Environmental Sciences (Kobe City)														
	Himegi Municipal Higashi-Shimin Center (Himeji City)														
Wakayama Pref.	Wakayama Prefectural Research Center of Environment and Public Health (Wakayama City)											○			○
Yamaguchi Pref.	Yamaguchi Prefectural Institute of Public Health and Environment (Yamaguchi City)			○											
Kagawa Pref.	Takamatsu Joint Prefectural Government Building (Takamatsu City)		○	○		○	○	○	○				○	○	
Fukuoka Pref.	Munakata Prefectural Government Building (Munakata City)														
	Omuta City Hall (Omuta City)	○			○		○	○	○			○	○	○	○
Kitakyushu City	Kitakyushu Air Quality Monitoring Station (Kitatyushu City)					○				○	○				

[34] Thallium and its compounds (as Thallium), [35] *O,O*-Diethyl *O*-2-quinoxalinyl phosphorothioate (synonym: Quinalphos), [37] 2,3,5,6-Tetrafluoro-4-methylbenzyl (*Z*)-3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropanecarboxylate (synonym: Tefluthrin), [38] Tellurium and its compounds (as Tellurium), [40] Phenanthrene, [42] *N*-Propyl-*N*-[2-(2,4,6-trichlorophenoxy)ethyl]imidazole-1-carboxamide (synonym: Prochloraz), [46] 1,4,5,6,7,7-Hexachlorobicyclo[2.2.1]-5-heptene-2,3-dicarboxylic acid (synonym: Chlorendic acid), [47] Hexahydro-1,3,5-trinitro-1,3,5-triazine (synonym: Cyclonite), [48] Benzylidyne trichloride, [49] Benzylidene dichloride, [52] Methyl 2-(4,6-dimethoxy-2-pyrimizinyloxy)-6-[1-(methoxyimino)ethyl]benzoate (synonym: Pyriminobac-methyl), [53] Methyl 3-(4-methoxy-6-methyl-1,3,5-triazine-2-ylcarbamoylsulfamoyl)-2-thenoate (synonym: Thifensulfuron methyl), [54] 2-Methyl-1,1'-biphenyl-3-ylmethyl (*Z*)-3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropanecarboxylate (synonym: Bifenthrin), [56] (*Z*)-2-Chloro-1-(2,4,5-trichlorophenyl)vinyl dimethyl phosphate (synonym: Tetrachlorvinphos or CVMP)

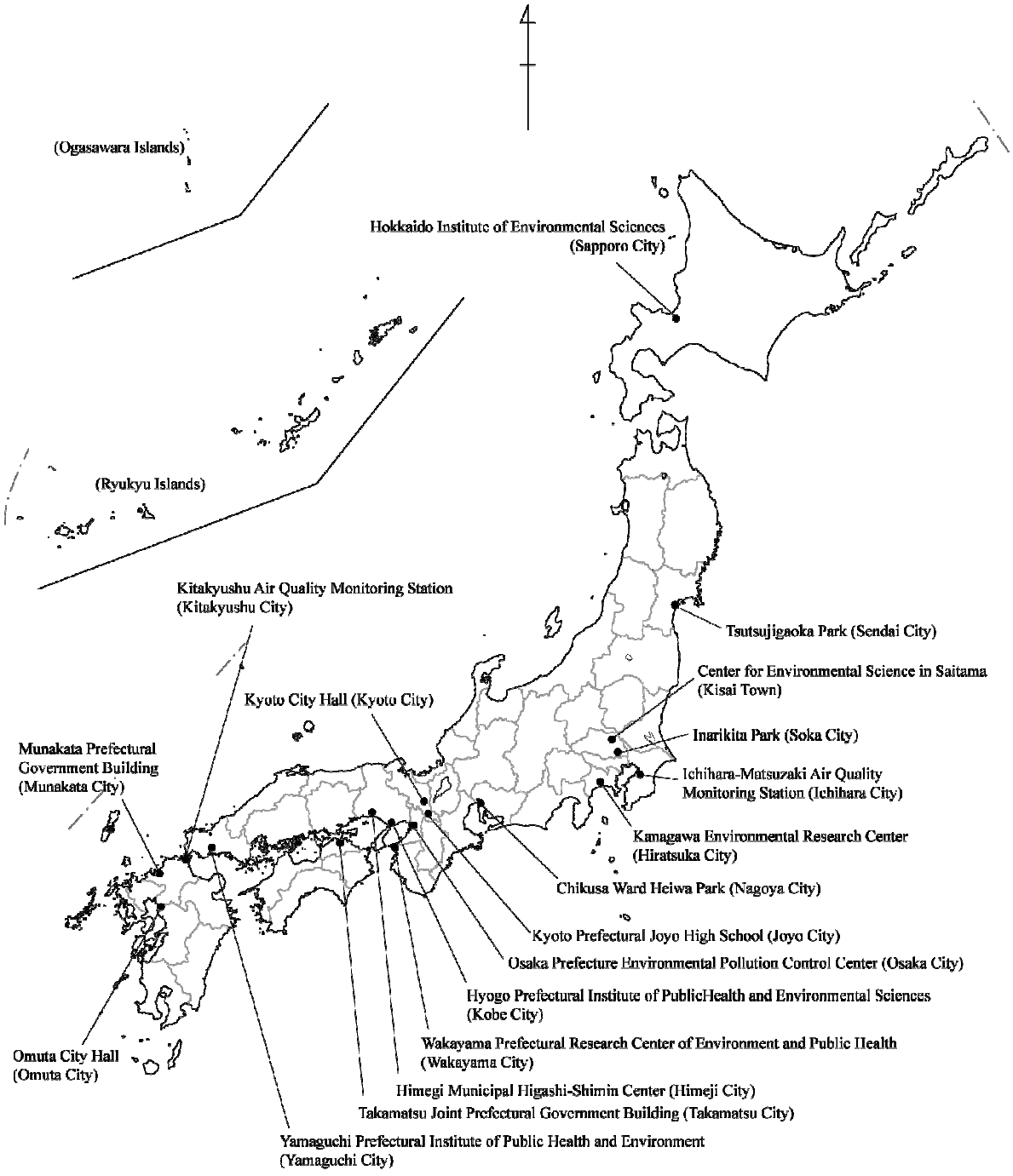


Figure 1-1-3 Surveyed sites (air) in the Initial Environmental Survey in FY 2006

(3) Detection limit

The detection limits of analysed values reported by the analytical laboratory are not necessarily the same because of differences in the properties of specimens and in the available measurement equipments. To enable summarisation, therefore, a unified detection limit is predetermined and the analytical values reported by the analytical laboratory are summarised by the following procedure.

Treatment of measured value as an undetected value in high-sensitivity analysis

In the case of high-sensitivity analysis, in which the detection limit of the analytical laboratory is lower than the unified detection limit, any measured value lower than the unified detection limit is treated as an undetected value in the nationwide summary (see schematic ①).

Elimination of undetected values in low-sensitivity analysis from summary subject

When the detection limit of the analytical laboratory is higher than the unified detection limit, any target chemical not detected is eliminated from the subject of the summary (see schematic ②).

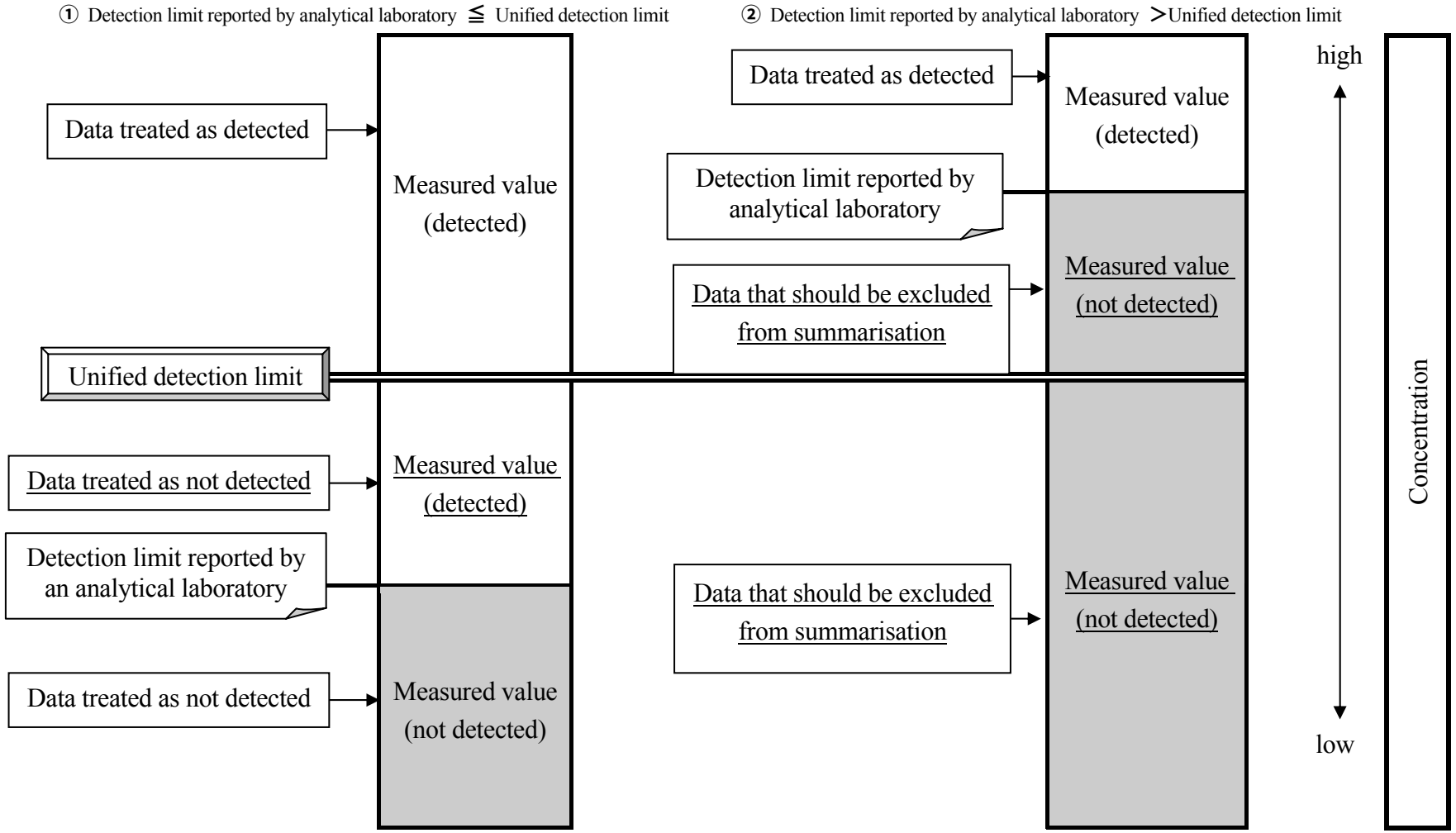
When the instrument detection limit (IDL) and the method detection limit (MDL) are given in the analytical method, which is described in reports on the investigation of the development of analytical methods for chemicals and adopted in the Initial Environmental Survey (hereafter, the Initial Environmental Survey Analytical Method), if the IDL measured by the analytical laboratory is lower than the given IDL, the MDL of the Initial Environmental Survey Analytical Method is used as the detection limit by the analytical laboratory.

When IDL and MDL are not given in the Initial Environmental Survey Analytical Method, the detection limit is predetermined by the following procedure.

When the analytical laboratory calculates the appropriate IDL and MDL following the calculation method stated in the analytical method development instruction manuals, this calculated MDL is used as the detection limit by the analytical laboratory.

When the appropriate IDL and MDL are not calculated by the analytical laboratory, one of the following procedures was employed to establish the detection limit by the analytical laboratory.

- deduction from the IDL and MDL calculated for the corresponding chemical by Initial Environmental Survey Analytical Method or other analytical laboratories
- deduction from the lowest calibration curve concentration and the results of recovery tests
- deduction from the results of addition and collection tests, the results of operation blank tests, and the signal/noise ratio (S/N ratio) obtained from the chromatogram of environmental specimens



Schematic of procedure for data summarisation

4. Summary of survey results

The detection ranges and the detection limits are shown in Table 1-2. The survey results are summarized as follows.

In surface water,13 out of the 49 target chemicals (groups) were detected.

・[4] Anthraquinone: 1 of the 7 valid sites
・[8] 2-Ethylamino-4-isopropylamino-6-methylthio-1,3,5-triazine (synonym: Ametryn): 1 of the 11 valid sites
・[9] 5-Ethyl-5-phenyl-2,4,6(1*H*,3*H*,5*H*)-pyrimidinetrione (synonym: Phenobarbital): 10 of the 15 valid sites
・[12] 1,2-Epoxybutane: 2 of the 5 valid sites
・[15] 2-(4-Chloro-6-ethylamino-1,3,5-triazine-2-yl)amino-2-methylpropiononitrile (synonym: Cyanazine): 6 of the 7 valid sites
・[20] *α*-Cyano-3-phenoxybenzyl 2,2-dichloro-1-(4-ethoxyphenyl)cyclopropanecarboxylate (synonym: Cycloprothrin): 1 of the 5 valid sites
・[22] Cyclohexanone: 1 of the 5 valid sites
・[26] Dichlorobromomethane: 3 of the 5 valid sites
・[29] 5,5-Diphenyl-2,4-imidazolidinedione (synonym: Phenytoin): 3 of the 11 valid sites
・[30] 2-(Di-*n*-butylamino)ethanol: 1 of the 5 valid sites
・[32] 1,4-Dibromobutane: 1 of the 5 valid sites
・[34] Thallium and its compounds (as Thallium): 4 of the 4 valid sites
・[52] Methyl 2-(4,6-dimethoxy-2-pyrimizinyloxy)-6-[1-(methoxyimino)ethyl]benzoate (synonym: Pyriminobac-methyl): 1 of the 13 valid sites

In sediment, 3 out of the 6 target chemicals (groups) were detected.

・[1] Adipic acid: 5 of the 5 valid sites
・[50] Benzyl alcohol: 3 of the 5 valid sites
・[51] Poly(oxyethylene) alkyl (C_{12-15}) ethers: 5 of the 5 valid sites

In wildlife, 1 out of the 1 target chemical was detected.

・[40] Phenanthrene: 3 of the 3 valid areas

In air, 7 out of the 28 target chemicals (groups) were detected.

・[5] Indium and its compounds (as Indium): 5 of the 5 valid sites
・[12] 1,2-Epoxybutane: 2 of the 3 valid sites
・[18] 2-Chloropropionic acid: 4 of the 5 valid sites
・[27] Mixture of 2,4-dinitro-6-octylphenyl crotonate and 2,6-dinitro-4-octylphenyl crotonate (octyl = 1-methylheptyl, 1-ethylhexy or 1-propylpentyl) (synonym: Dinocap or DPC): 1 of the 5 valid sites
・[34] Thallium and its compounds (as Thallium): 5 of the 5 valid sites
・[38] Tellurium and its compounds (as Tellurium): 5 of the 5 valid sites
・[40] Phenanthrene: 5 of the 5 valid sites

Table 1-2 Summary of the detection ranges and the detection limits in the Initial Environmental Survey in FY 2006

Target chemicals		Surface water	(ng/L)	Sediment	(ng/g-dry)	Wildlife	(ng/g-wet)	Air	(ng/m^3)
No.	Name	Detection range and frequency	Detection limit	Detection range and frequency	Detection limit	Detection range and frequency	Detection limit	Detection range and frequency	Detection limit
[1]	Adipic acid	nd 0/6	3,800	nd～190 5/5	6				
[2]	3'-Amino-4'-methoxyacetanilide	nd 0/7	2						
[3]	4-Allyl-1,2-dimethoxybenzene	nd 0/5	2						
[4]	Anthraquinone	nd～140 1/7	40						
[5]	Indium and its compounds (as Indium)	nd 0/4	1.5					0.011～ 0.55 5/5	0.007
[6]	*O*-Ethyl *O*-2-(isopropoxycarbonyl)phenyl *N*-isopropylphosphoramidothioate (synonym: Isofenphos)	nd 0/8	2						
[7]	*S*-Ethyl 2-(4-chloro-2-methylphenoxy)thioacetate (synonym: Phenothiol or MCPA-thioethyl)	nd 0/5	7					nd 0/6	9
[8]	2-Ethylamino-4-isopropylamino-6-methylthio-1,3,5-triazine (synonym: Ametryn)	nd～5.1 1/11	3.2						
[9]	5-Ethyl-5-phenyl-2,4,6(1*H*,3*H*,5*H*)-pyrimidinetrione (synonym: Phenobarbital)	nd～170 10/15	4					nd 0/5	0.9
[10]	Ethyleneimine	nd 0/6	4						
[11]	4'-Ethoxyacetanilide (synonym: Phenacetin)	nd 0/5	0.6						
[12]	1,2-Epoxybutane	nd～4.7 2/5	1.6					nd～160 2/3	16
[13]	4-Oxiranyl-1,2-epoxycyclohexane							nd 0/5	16
[14]	5-Chloro-*N*-{2-[4-(2-ethoxyethyl)-2,3-dimethylphenoxy]ethyl}-6-ethylpyrimidine-4-amine (synonym: Pylimidifen)	nd 0/7	70						
[15]	2-(4-Chloro-6-ethylamino-1,3,5-triazine-2-yl)amino-2-methylpropiononitrile (synonym: Cyanazine)	nd～2.5 6/7	0.4					nd 0/5	0.4
[16]	Chlorotrifluoromethane (synonym: CFC-13)	nd 0/5	3						
[17]	*O*-6-Chloro-3-phenyl-4-pyridazinyl *S*-*n*-octyl thiocarbonate (synonym: Pyridate)	nd 0/5	4					nd 0/5	0.20
[18]	2-Chloropropionic acid	nd 0/5	6					nd～1.4 4/5	0.4
[19]	1-Chloro-2-methylpropene	nd 0/5	1.4	nd 0/5	0.13				
[20]	α-Cyano-3-phenoxybenzyl 2,2-dichloro-1-(4-ethoxyphenyl) cyclopropanecarboxylate (synonym: Cycloprothrin)	nd～120 1/5	6					nd 0/5	23
[21]	[1α(*S**),3α]-(±)-Cyano (3-phenoxyphenyl)methyl 3-(2,2-dichloroethenyl)-2,2-dimethylcyclopropanecarboxylate (synonym: α-Cypermethrin)	nd 0/10	10						
[22]	Cyclohexanone	nd～500 1/5	400	nd 0/5	13				
[23]	1-(3,5-Dichloro-2,4-difluorophenyl)-3-(2,6-difluorobenzoyl)urea (synonym: Teflubenzuron)	nd 0/6	11					nd 0/5	0.20
[24]	2,4'-Dichloro-α-(5-pyrimidinyl) benzhydryl alcohol (synonym: Fenarimol)	nd 0/5	1.8					nd 0/5	2.2

Target chemicals		Surface water	(ng/L)	Sediment	(ng/g-dry)	Wildlife	(ng/g-wet)	Air	(ng/m^3)
No.	Name	Detection range and frequency	Detection limit	Detection range and frequency	Detection limit	Detection range and frequency	Detection limit	Detection range and frequency	Detection limit
[25]	2-(2,4-Dichlorophenyl)-1-(1*H*-1,2,4-triazol-1-yl)-2-hexanol (synonym: Hexaconazole)	nd 0/6	6					nd 0/5	1.6
[26]	Dichlorobromomethane	nd～12 3/5	4	nd 0/5	0.6				
[27]	Mixture of 2,4-dinitro-6-octylphenyl crotonate and 2,6-dinitro-4-octylphenyl crotonate (octyl = 1-methylheptyl, 1-ethylhexy or 1-propylpentyl) (synonym: Dinocap or DPC)							nd～0.29 1/5	0.19
[28]	Divinylbenzene	nd 0/5	2						
[29]	5,5-Diphenyl-2,4-imidazolidinedione (synonym: Phenytoin)	nd～11 3/11	2.2						
[30]	2-(Di-*n*-butylamino)ethanol	nd～76 1/5	25					nd 0/5	18
[31]	Dibromotetrafluoroethane (synonym: Halon-2402)	nd 0/5	10						
[32]	1,4-Dibromobutane	nd～4.0 1/5	1.5						
[33]	1,3-Dibromopropane	nd 0/5	0.6						
[34]	Thallium and its compounds (as Thallium)	3.0～16 4/4	1.7					0.024～0.21 5/5	0.002
[35]	*O,O*-Diethyl *O*-2-quinoxalinyl phosphorothioate (synonym: Quinalphos)	nd 0/11	8					nd 0/5	3
[36]	Tetrachlorodifluoroethane (synonym: CFC-112)	nd 0/5	11						
[37]	2,3,5,6-Tetrafluoro-4-methylbenzyl (*Z*)-3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropanecarboxylate (synonym: Tefluthrin)	nd 0/9	8					nd 0/6	0.5
[38]	Tellurium and its compounds (as Tellurium)	nd 0/4	19					0.019～0.43 5/5	0.016
[39]	2,4,6-Trinitrotoluene	nd 0/5	2.7						
[40]	Phenanthrene					1.2～3.0 3/3	0.2	3.7～26 5/5	1.6
[41]	1-*tert*-Butyl-3-(2,6-diisopropyl-4-phenoxyphenyl)thiourea (synonym: Diafenthiuron)	nd 0/5	20						
[42]	*N*-Propyl-*N*-[2-(2,4,6-trichlorophenoxy)ethyl]imidazole-1-carboxamide (synonym: Prochloraz)	nd 0/8	1.8					nd 0/5	0.3
[43]	Bromochlorodifluoromethane (synonym: Halon-1211)	nd 0/5	20						
[44]	2-(4-Bromodifluoromethoxyphenyl)-2-methylpropyl 3-phenoxybenzyl ether (synonym: Halfenprox)	nd 0/11	13						
[45]	3-Bromo-1-propene (synonym: Allyl bromide)	nd 0/5	1.8						
[46]	1,4,5,6,7,7-Hexachlorobicyclo [2.2.1]-5-heptene-2,3-dicarboxylic acid (synonym: Chlorendic acid)	nd 0/5	25					nd 0/5	6
[47]	Hexahydro-1,3,5-trinitro-1,3,5-triazine (synonym: Cyclonite)	nd 0/5	22					nd 0/5	1.9
[48]	Benzylidyne trichloride							nd 0/5	4
[49]	Benzylidene dichloride							nd 0/5	2
[50]	Benzyl alcohol	nd 0/5	50	nd～21 3/5	7				

Target chemicals		Surface water	(ng/L)	Sediment	(ng/g-dry)	Wildlife	(ng/g-wet)	Air	(ng/m^3)
No.	Name	Detection range and frequency	Detection limit	Detection range and frequency	Detection limit	Detection range and frequency	Detection limit	Detection range and frequency	Detection limit
[51]	Poly(oxyethylene) alkyl (C_{12-15}) ethers			9.0～2,000 5/5	※780				
[51-1]	Poly(oxyethylene) dodecyl ethers (polymerisation degree = 2-19)			8.0～1,500 5/5	※150				
[51-1-1]	Di(oxyethylene) dodecyl ether			nd 0/5	12				
[51-1-2]	Tri(oxyethylene) dodecyl ether			nd 0/5	17				
[51-1-3]	Tetra(oxyethylene) dodecyl ether			nd 0/5	18				
[51-1-4]	Penta(oxyethylene) dodecyl ether			nd 0/5	16				
[51-1-5]	Hexa(oxyethylene) dodecyl ether			nd～17 2/5	12				
[51-1-6]	Hepta(oxyethylene) dodecyl ether			nd～20 4/5	11				
[51-1-7]	Octa(oxyethylene) dodecyl ether			nd～31 4/5	9.6				
[51-1-8]	Nona(oxyethylene) dodecyl ether			nd～64 4/5	8.7				
[51-1-9]	Deca(oxyethylene) dodecyl ether			nd～110 4/5	8.7				
[51-1-10]	Undeca(oxyethylene) dodecyl ether			nd～160 4/5	7.3				
[51-1-11]	Dodeca(oxyethylene) dodecyl ether			nd～210 4/5	6.2				
[51-1-12]	Trideca(oxyethylene) dodecyl ether			nd～190 4/5	8.0				
[51-1-13]	Tetradeca(oxyethylene) dodecyl ether			nd～170 4/5	6.4				
[51-1-14]	Pentadeca(oxyethylene) dodecyl ether			nd～170 5/5	4.3				
[51-1-15]	Hexadeca(oxyethylene) dodecyl ether			nd～150 5/5	3.0				
[51-1-16]	Heptadeca(oxyethylene) dodecyl ether			nd～81 5/5	3.6				
[51-1-17]	Octadeca(oxyethylene) dodecyl ether			nd～43 5/5	2.5				
[51-1-18]	Nonadeca(oxyethylene) dodecyl ether			nd～31 5/5	1.0				
[51-2]	Poly(oxyethylene) tridecyl ethers (polymerisation degree = 2-19)			nd～68 5/5	※250				
[51-2-1]	Di(oxyethylene) tridecyl ether			nd 0/5	17				
[51-2-2]	Tri(oxyethylene) tridecyl ether			nd 0/5	22				
[51-2-3]	Tetra(oxyethylene) tridecyl ether			nd 0/5	22				
[51-2-4]	Penta(oxyethylene) tridecyl ether			nd 0/5	22				
[51-2-5]	Hexa(oxyethylene) tridecyl ether			nd 0/5	21				
[51-2-6]	Hepta(oxyethylene) tridecyl ether			nd 0/5	20				
[51-2-7]	Octa(oxyethylene) tridecyl ether			nd 0/5	19				
[51-2-8]	Nona(oxyethylene) tridecyl ether			nd 0/5	21				
[51-2-9]	Deca(oxyethylene) tridecyl ether			nd 0/5	19				
[51-2-10]	Undeca(oxyethylene) tridecyl ether			nd 0/5	15				
[51-2-11]	Dodeca(oxyethylene) tridecyl ether			nd 0/5	13				
[51-2-12]	Trideca(oxyethylene) tridecyl ether			nd 0/5	15				

Target chemicals		Surface water	(ng/L)	Sediment	(ng/g-dry)	Wildlife	(ng/g-wet)	Air	(ng/m^3)
No.	Name	Detection range and frequency	Detection limit	Detection range and frequency	Detection limit	Detection range and frequency	Detection limit	Detection range and frequency	Detection limit
[51-2-13]	Tetradeca(oxyethylene) tridecyl ether			nd 0/5	9.6				
[51-2-14]	Pentadeca(oxyethylene) tridecyl ether			nd～8.7 4/5	6.9				
[51-2-15]	Hexadeca(oxyethylene) tridecyl ether			nd～11 4/5	5.3				
[51-2-16]	Heptadeca(oxyethylene) tridecyl ether			nd～10 3/5	4.3				
[51-2-17]	Octadeca(oxyethylene) tridecyl ether			nd～8.1 3/5	3.0				
[51-2-18]	Nonadeca(oxyethylene) tridecyl ether			nd～5.8 4/5	1.7				
[51-3]	Poly(oxyethylene) tetradecyl ethers (polymerisation degree = 2-19)			nd～450 5/5	※230				
[51-3-1]	Di(oxyethylene) tetradecyl ether			nd 0/5	18				
[51-3-2]	Tri(oxyethylene) tetradecyl ether			nd 0/5	19				
[51-3-3]	Tetra(oxyethylene) tetradecyl ether			nd 0/5	18				
[51-3-4]	Penta(oxyethylene) tetradecyl ether			nd 0/5	23				
[51-3-5]	Hexa(oxyethylene) tetradecyl ether			nd 0/5	21				
[51-3-6]	Hepta(oxyethylene) tetradecyl ether			nd 0/5	20				
[51-3-7]	Octa(oxyethylene) tetradecyl ether			nd～18 1/5	17				
[51-3-8]	Nona(oxyethylene) tetradecyl ether			nd～39 1/5	17				
[51-3-9]	Deca(oxyethylene) tetradecyl ether			nd～54 1/5	16				
[51-3-10]	Undeca(oxyethylene) tetradecyl ether			nd～66 1/5	12				
[51-3-11]	Dodeca(oxyethylene) tetradecyl ether			nd～73 3/5	11				
[51-3-12]	Trideca(oxyethylene) tetradecyl ether			nd～54 2/5	14				
[51-3-13]	Tetradeca(oxyethylene) tetradecyl ether			nd～41 2/5	8.7				
[51-3-14]	Pentadeca(oxyethylene) tetradecyl ether			nd～34 4/5	5.3				
[51-3-15]	Hexadeca(oxyethylene) tetradecyl ether			nd～26 4/5	3.9				
[51-3-16]	Heptadeca(oxyethylene) tetradecyl ether			nd～15 4/5	4.2				
[51-3-17]	Octadeca(oxyethylene) tetradecyl ether			nd～6.7 4/5	2.7				
[51-3-18]	Nonadeca(oxyethylene) tetradecyl ether			nd～30 3/5	2.7				
[51-4]	Poly(oxyethylene) pentadecyl ethers (polymerisation degree = 2-19)			nd 0/5	※150				
[51-4-1]	Di(oxyethylene) pentadecyl ether			nd 0/5	8.0				
[51-4-2]	Tri(oxyethylene) pentadecyl ether			nd 0/5	10				
[51-4-3]	Tetra(oxyethylene) pentadecyl ether			nd 0/5	11				
[51-4-4]	Penta(oxyethylene) pentadecyl ether			nd 0/5	14				
[51-4-5]	Hexa(oxyethylene) pentadecyl ether			nd 0/5	13				
[51-4-6]	Hepta(oxyethylene) pentadecyl ether			nd 0/5	12				
[51-4-7]	Octa(oxyethylene) pentadecyl ether			nd 0/5	15				
[51-4-8]	Nona(oxyethylene) pentadecyl ether			nd 0/5	12				

Target chemicals		Surface water	(ng/L)	Sediment	(ng/g-dry)	Wildlife	(ng/g-wet)	Air	(ng/m^3)
No.	Name	Detection range and frequency	Detection limit	Detection range and frequency	Detection limit	Detection range and frequency	Detection limit	Detection range and frequency	Detection limit
[51-4-9]	Deca(oxyethylene) pentadecyl ether			nd 0/5	12				
[51-4-10]	Undeca(oxyethylene) pentadecyl ether			nd 0/5	9.2				
[51-4-11]	Dodeca(oxyethylene) pentadecyl ether			nd 0/5	7.8				
[51-4-12]	Trideca(oxyethylene) pentadecyl ether			nd 0/5	7.8				
[51-4-13]	Tetradeca(oxyethylene) pentadecyl ether			nd 0/5	5.5				
[51-4-14]	Pentadeca(oxyethylene) pentadecyl ether			nd 0/5	3.9				
[51-4-15]	Hexadeca(oxyethylene) pentadecyl ether			nd 0/5	3.4				
[51-4-16]	Heptadeca(oxyethylene) pentadecyl ether			nd 0/5	3.1				
[51-4-17]	Octadeca(oxyethylene) pentadecyl ether			nd 0/5	3.1				
[51-4-18]	Nonadeca(oxyethylene) pentadecyl ether			nd 0/1	1.8				
[52]	Methyl 2-(4,6-dimethoxy-2-pyrimizinyloxy)-6-[1-(methoxyimino)ethyl]benzoate (synonym: Pyriminobac-methyl)	nd～2.5 1/13	※17					nd 0/5	※1.0
[53]	Methyl 3-(4-methoxy-6-methyl-1,3,5-triazine-2-ylcarbamoylsulfamoyl)-2-thenoate (synonym: Thifensulfuron methyl)	nd 0/7	40					nd 0/5	3
[54]	2-Methyl-1,1'-biphenyl-3-ylmethyl (*Z*)-3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropanecarboxylate (synonym: Bifenthrin)							nd 0/5	0.3
[55]	9-Methoxy-7*H*-furo[3,2-*g*][1]benzopyran-7-one (synonym: Methoxsalen)	nd 0/14	10						
[56]	(*Z*)-2-Chloro-1-(2,4,5-trichlorophenyl)vinyl dimethyl phosphate (synonym: Tetrachlorvinphos or CVMP)	nd 0/8	1.0					nd 0/5	0.4

(Note 1) Detection frequency is based on the number of sites or areas, thus means (the number of detected sites/the number of surveyed sites). A site where data were not available was excluded from the number of surveyed sites. A site where the data became invalid under a unified detection limit was also excluded. In cases where a chemical is detected in one or more sameples from a site or an area, the site or area can be defined as one "detected site" or one "detected area".

(Note 2) Detection range is based on the number of samples and therefore can be shown as "nd～" even if a target chemical is detected in all sites (or areas).

(Note 3) ☐ means the medium was not surveyed.

(Note 4) ※ is the sum value of detection limits of each congener and isomer, and therefore a detection range that does not exceed this value can be shown instead of "nd".