Chapter 1 Results of the Initial Environmental Survey in FY2014

1. Purpose of the survey

Initial Environmental Surveys are implemented in compliance with the Law Concerning Reporting, etc. of Releases of Specific Chemical Substances to the Environment and Promoting Improvement in Their Management (Law No. 86, 1999) (hereafter, the PRTR); these surveys provide the basic resources to properly evaluate chemical substances which may present environmental risk by compiling and tracking data notably from areas susceptible to high concentrations in their general environments, as well as for evaluating environmental and exposure risks to chemical substances that are other than as designated by law.

2. Target chemicals

In the FY2014 Initial Environmental Survey, 15 chemicals (groups) that were selected and designated as target chemicals. The combinations of target chemicals and the surveyed media are given below.

No.	Name	The Chemical Substances Control Law		The PRTR Law		Surveyed media		
		Before the revision	After the revision	Before the revision	After the revision	Surface water	Sedi-ment	Air
[1]	6-Acetyl-1,1,2,4,4,7-hexamethyltetralin					○		
[2]	3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate			I 27	I 34			○
[3]	Erythromycin, Clarithromycin and other Macrolide compounds							
	[3-1] Erythromycin					○		
	[3-2] Clarithromycin					○		
	[3-3] Oleandomycin					○		
	[3-4] Josamycin					○		
	[3-5] Tylosin					○		
	[3-6] Tacrolimus					○		
	[3-7] 12-Deoxyerythromycin (synonym: Erythromycin B)					○		
	[3-8] Leucomycin A5					○		
	[3-9] Roxithromycin					○		
	[3-10] Clindamycin					○		
	[3-11] Lincomycin					○		
[4]	Oxytetracycline, Chlortetracycline, other Tetracycline compounds and their metabolites							
	[4-1] Oxytetracycline					○		
	[4-2] Chlortetracycline					○		
	[4-3] Tetracycline					○		
	[4-4] Doxycycline					○		
	[4-5] Isochlortetracycline					○		
[5]	5-Chloro-2-(2,4-dichlorophenoxy)phenol (synonym: Triclosan)	III Monitored				○		
[6]	2-Methoxyethyl acetate (synonym: Ethylene glycol monomethyl ether acetate)	II Monitored		I 103	I 135			○
[7]	Methyl-1,3-phenylene diisocyanate(synonym: *m*-Tolylene diisocyanate)		Priority Assessment Chemical Substances	I 338	I 298			
	[7-1] 2-Methyl-1,3-phenylene diisocyanate							○
	[7-2] 4-Methyl-1,3-phenylene diisocyanate							○

No.	Name	The Chemical Substances Control Law		The PRTR Law		Surveyed media		
		Before the revision	After the revision	Before the revision	After the revision	Surface water	Sedi-ment	Air
[8]	1,2-Dichloro-4-nitrobenzene	II Monitored III Monitored			I 166	○	○	
[9]	Divinylbenzenes (Total of *m*-Divinylbenzene and *p*-Divinylbenzene)	III Monitored		II 37	I 202			○
[10]	6,6'-Di-*tert*-butyl-4,4'-dimethyl-2,2'-methylene diphenol	II Monitored					○	
[11]	*N*,*N*-Dimethylacetamide	II Monitored			I 213			○
[12]	2,4-Dimethylaniline	III Monitored			I 214	○	○	
[13]	Sulfamethoxazole, other Sulfanilamide compounds and 2,4-Diaminopyrimidine compounds							
	[13-1] Sulfamethoxazole					○		
	[13-2] Sulfaethoxypyridazine					○		
	[13-3] Sulfaquinoxaline					○		
	[13-4] Sulfaguanidine					○		
	[13-5] Sulfachlorpyridazine					○		
	[13-6] Sulfadiazine					○		
	[13-7] Sulfadimethoxine					○		
	[13-8] Sulfathiazole					○		
	[13-9] Sulfadoxine					○		
	[13-10] Sulfatroxazole					○		
	[13-11] Sulfanitran					○		
	[13-12] Sulfanilamide					○		
	[13-13] Sulfapyridine					○		
	[13-14] Sulfabromomethazine					○		
	[13-15] Sulfabenzamide					○		
	[13-16] Sulfadimidine					○		
	[13-17] Sulfamethoxypyridiazine					○		
	[13-18] Sulfamerazine					○		
	[13-19] Sulfamonomethoxine					○		
	[13-20] Sulfisoxazole					○		
	[13-21] Sulfisozole					○		
	[13-22] Sulfisomidine					○		
	[13-23] Ormetoprim					○		
	[13-24] Diaveridine					○		
	[13-25] Trimethoprim					○		
	[13-26] Pyrimethamine					○		
[14]	2,2',4,4'-Tetrahydroxybenzophenone					○		
[15]	Butan-2-one oxime	II Monitored						○

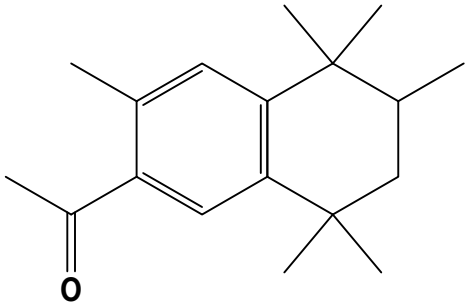
(Note 1) “The Chemical Substances Control Law” hereafter means “Law Concerning the Examination and Regulation of Manufacture, etc. of Chemical Substances (Law No. 117 of 1973).”

(Note 2) Pre-Revision “Areas as designated under the Chemical Substances Control Law” refer to those areas designated prior to the 20 May 2009 revision of the law (which went into effect on 1 April 2011), while “Post Revision Areas” refer to the areas defined as designated post-20 May 2009.

(Note 3) “Before the revision” in "The PRTR Law" means “appointments before the revision of government ordinance on November 21, 2008" and “After the revision” in "The PRTR Law" means “appointments after that revision".

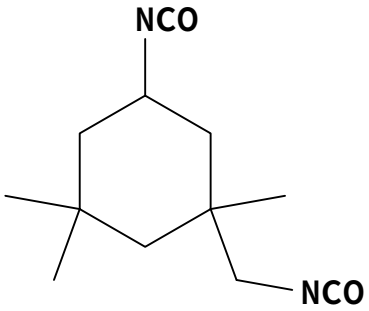
Chemical and physical properties of target chemicals of the Initial Environmental Survey are as follows.

[1] 6-Acetyl-1,1,2,4,4,7-hexamethyltetralin



Molecular formula: $C_{18}H_{26}O$
CAS: 21145-77-7
ENCS: 4-1179
MW: 258.40
mp: Uncertain
bp: Uncertain
sw: Uncertain
Specific gravities: Uncertain
logPow: Uncertain

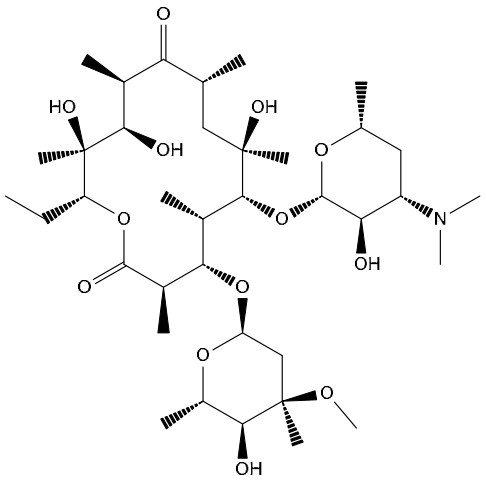
[2] 3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate



Molecular formula: $C_{12}H_{18}N_2O_2$
CAS: 4098-71-9
ENCS: 3-2492
MW: 222.28
mp: -60°C [1)]
bp: 158°C (10mmHg) [1)]
sw: React with water
Specific gravities: 1.062 g/cm^3 [3)]
logPow: Uncertain

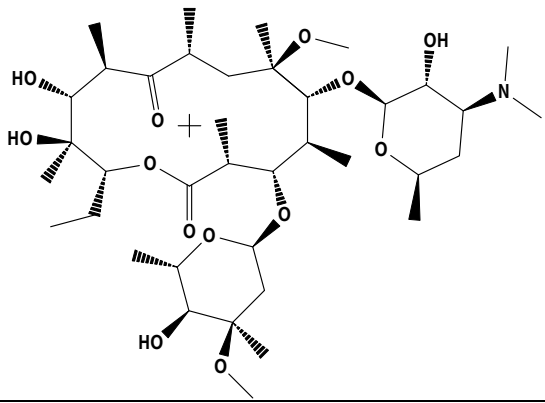
[3] Erythromycin, Clarithromycin and other Macrolide compounds

[3-1] Erythromycin



Molecular formula: $C_{37}H_{67}NO_{13}$
CAS: 114-07-8
ENCS: No pertinence
MW: 733.93
mp: 191°C [1)]
bp: Uncertain
sw: 1.2g/kg (30°C),
0.4g/kg (80°C) [3)]
Specific gravities: Uncertain
logPow: Uncertain

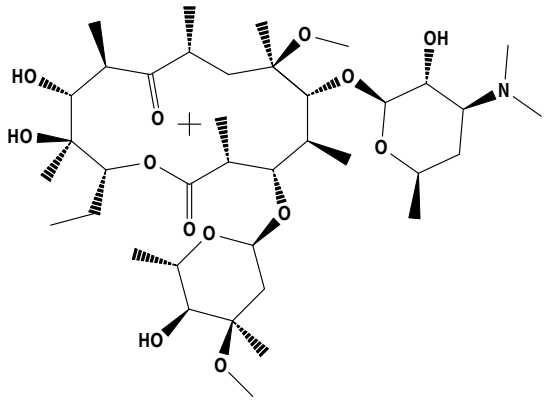
[3-2] Clarithromycin



Molecular formula: $C_{38}H_{69}NO_{13}$
CAS: 81103-11-9
ENCS: No pertinence
MW: 747.95
mp: 220-227°C [4)]
bp: Uncertain
sw: Uncertain
Specific gravities: Uncertain
logPow: Uncertain

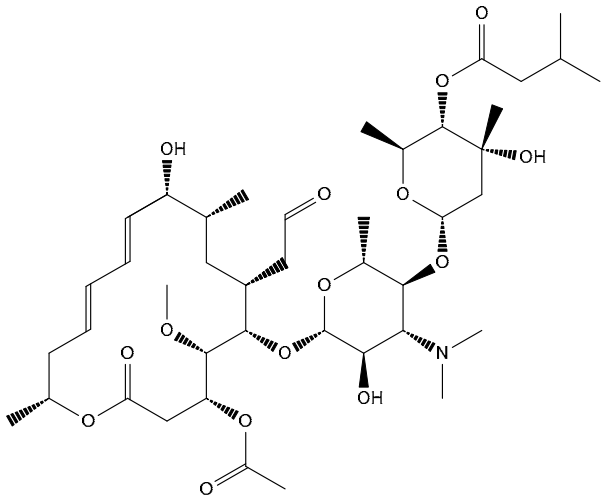
(Abbreviations) CAS CAS registry number, ENCS registry number in the Existing and New Chemical Substances List, MW molecular weight, mp melting point, bp boiling point, SW solubility in water, Specific gravities Specific gravity(no unit) or density, logPow *n*-octanol-water partition coefficient, kPa kilopascal (1 atom approximately equal to 101.3kPa).

[3-3] Oleandomycin



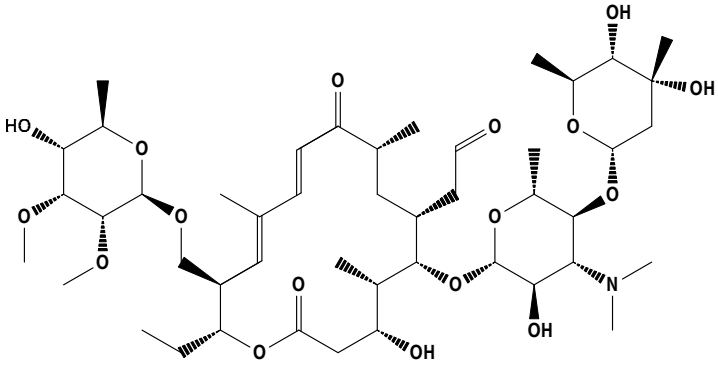
Molecular formula: $C_{35}H_{61}NO_{12}$
CAS: 3922-90-5
ENCS: 9-2288
MW: 687.86
mp: Uncertain
bp: Uncertain
sw: Uncertain
Specific gravities: Uncertain
logPow: Uncertain

[3-4] Josamycin



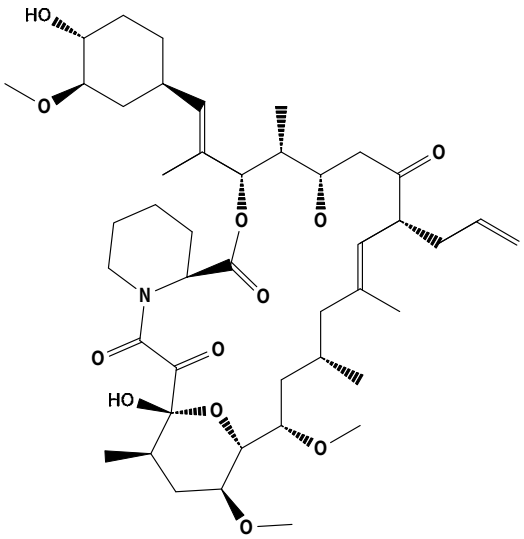
Molecular formula: $C_{42}H_{69}NO_{15}$
CAS: 16846-24-5
ENCS: 8-467
MW: 827.99
mp: 127-132°C [4)]
bp: Uncertain
sw: Uncertain
Specific gravities: Uncertain
logPow: Uncertain

[3-5] Tylosin



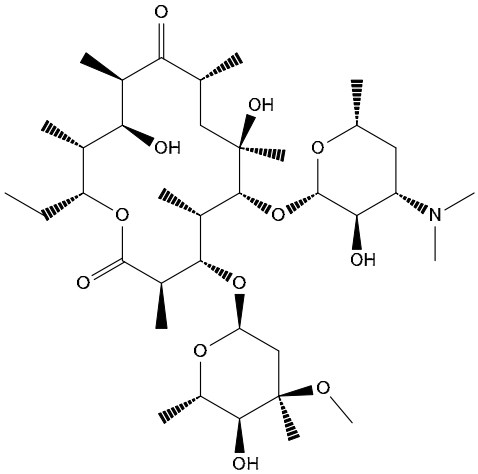
Molecular formula: $C_{46}H_{77}NO_{17}$
CAS: 1401-69-0
ENCS: No pertinence
MW: 916.1
mp: Uncertain
bp: Uncertain
sw: Uncertain
Specific gravities: Uncertain
logPow: Uncertain

[3-6] Tacrolimus



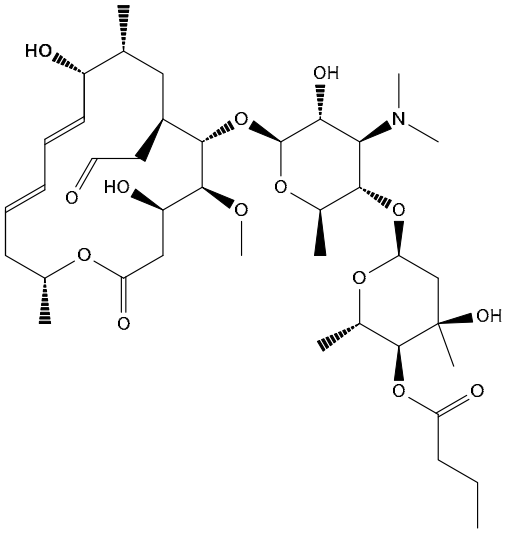
Molecular formula: $C_{46}H_{77}NO_{17}$
CAS: 104987-11-3
ENCS: No pertinence
MW: 916.1
mp: 123-133°C [4)]
bp: Uncertain
sw: Practically insoluble [4)]
Specific gravities: Uncertain
logPow: Uncertain

[3-7] 12-Deoxyerythromycin (synonym: Erythromycin B)



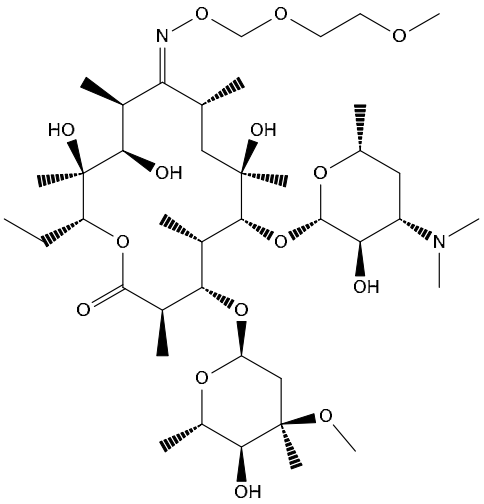
Molecular formula: $C_{37}H_{67}NO_{12}$
CAS: 527-75-3
ENCS: No pertinence
MW: 717.93
mp: Uncertain
bp: Uncertain
sw: Uncertain
Specific gravities: Uncertain
logPow: Uncertain

[3-8] Leucomycin A5



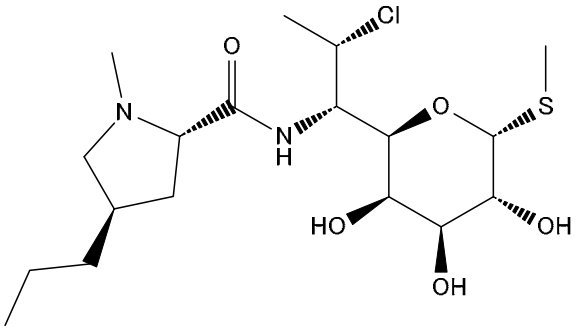
Molecular formula: $C_{39}H_{65}NO_{14}$
CAS: 18361-45-0
ENCS: No pertinence
MW: 771.93
mp: Uncertain
bp: Uncertain
sw: Uncertain
Specific gravities: Uncertain
logPow: Uncertain

[3-9] Roxithromycin



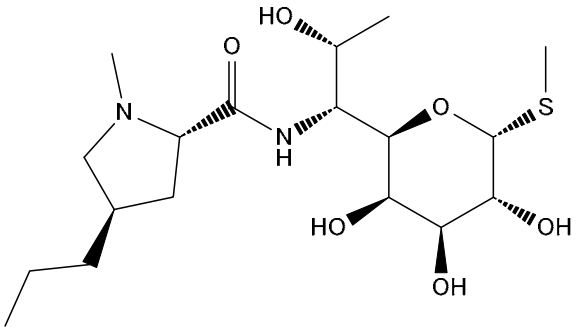
Molecular formula: $C_{41}H_{76}N_2O_{15}$
CAS: 80214-83-1
ENCS: No pertinence
MW: 837.05
mp: 122-126°C [4)]
bp: Uncertain
sw: Uncertain
Specific gravities: Uncertain
logPow: Uncertain

[3-10] Clindamycin



Molecular formula: $C_{18}H_{33}ClN_2O_5S$
CAS: 18323-44-9
ENCS: No pertinence
MW: 328.92
mp: 189-191°C [4)]
bp: Uncertain
sw: 0.17-0.20g/mL
Specific gravities: Uncertain
logPow: Uncertain

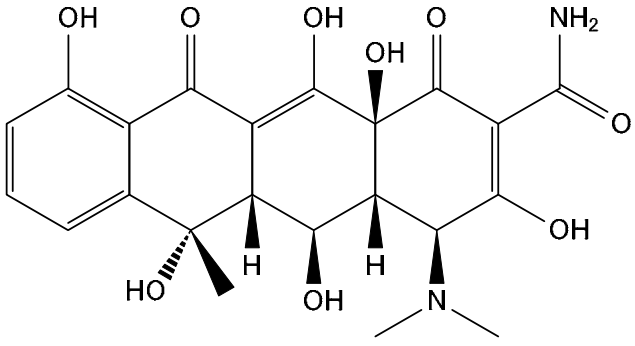
[3-11] Lincomycin



Molecular formula: $C_{18}H_{34}N_2O_6S$
CAS: 154-21-2
ENCS: No pertinence
MW: 406.54
mp: 145-147°C [4)]
bp: Uncertain
sw: Uncertain
Specific gravities: Uncertain
logPow: Uncertain

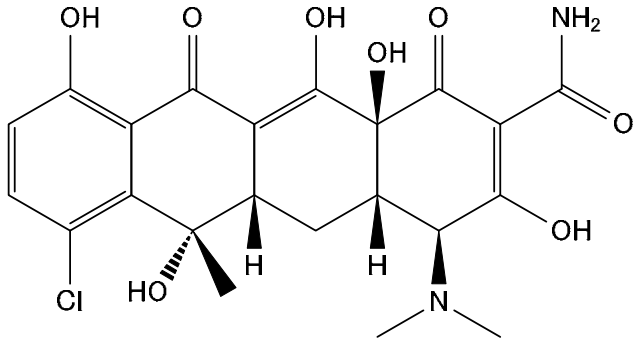
[4] Oxytetracycline, Chlortetracycline, other Tetracycline compounds and their metabolites

[4-1] Oxytetracycline



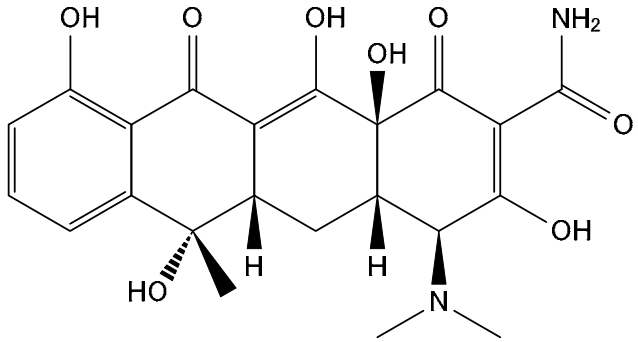
Molecular formula: $C_{22}H_{24}N_2O_9$
CAS: 79-57-2
ENCS: 9-271
MW: 460.43
mp: 184.5°C [3)]
bp: Uncertain
sw: Uncertain
Specific gravities: 1.634g/cm^3 [3)]
logPow: Uncertain

[4-2] Chlortetracycline



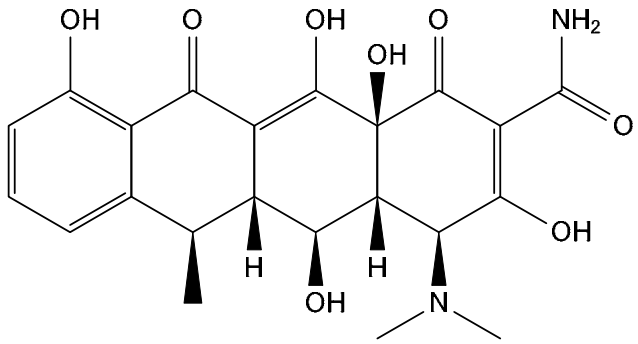
Molecular formula: $C_{22}H_{23}ClN_2O_8$
CAS: 57-62-5
ENCS: No pertinence
MW: 366.88
mp: 168.5°C [3)]
bp: Uncertain
sw: Uncertain
Specific gravities: Uncertain
logPow: Uncertain

[4-3] Tetracycline



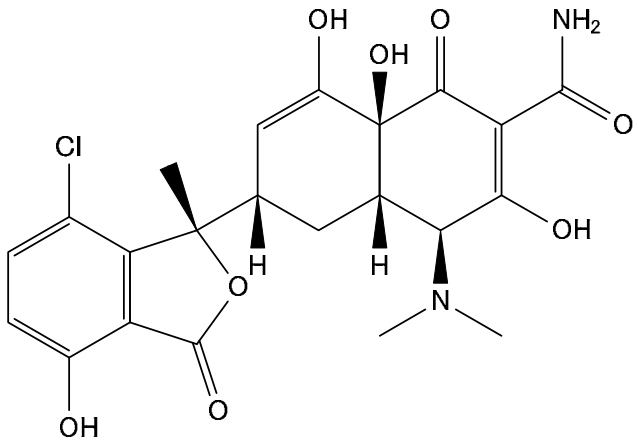
Molecular formula: $C_{22}H_{24}N_2O_8$
CAS: 60-54-8
ENCS: No pertinence
MW: 478.88
mp: 172°C [3)]
bp: Uncertain
sw: Uncertain
Specific gravities: Uncertain
logPow: Uncertain

[4-4] Doxycycline



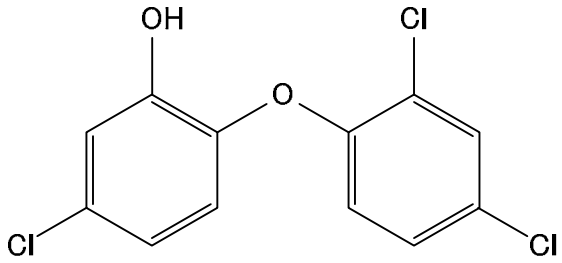
Molecular formula: $C_{22}H_{24}N_2O_8$
CAS: 564-25-0
ENCS: No pertinence
MW: 444.43
mp: Uncertain
bp: Uncertain
sw: Uncertain
Specific gravities: Uncertain
logPow: Uncertain

[4-5] Isochlortetracycline



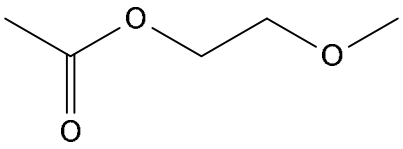
Molecular formula: $C_{22}H_{23}ClN_2O_8$
CAS: 514-53-4
ENCS: No pertinence
MW: 366.88
mp: Uncertain
bp: Uncertain
sw: Uncertain
Specific gravities: Uncertain
logPow: Uncertain

[5] 5-Chloro-2-(2,4-dichlorophenoxy)phenol (synonym: Triclosan)



Molecular formula: $C_{12}H_7Cl_3O_2$
CAS: 3380-34-5
ENCS: 9-922, 9-381
MW: 289.54
mp: 54-57.3°C [6]
bp: Uncertain
sw: 10mg/L(25°C) [3]
Specific gravities: Uncertain
logPow: 4.76 [3]

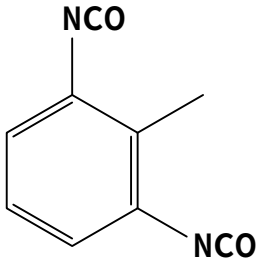
[6] 2-Methoxyethyl acetate



Molecular formula: $C_5H_{10}O_3$
CAS: 110-49-6
ENCS: 2-740
MW: 118.13
mp: -65.1°C [7]
bp: 145°C [7]
sw: Immixture [7]
Specific gravities: 1.0067 (20/20°C) [7]
logPow: Uncertain

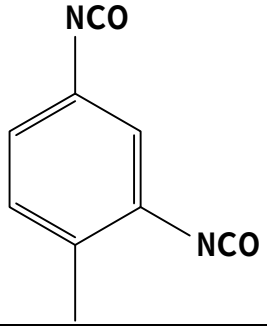
[7] Methyl-1,3-phenylene diisocyanate (synonym: *m*-Tolylene diisocyanate)

[7-1] 2-Methyl-1,3-phenylene diisocyanate



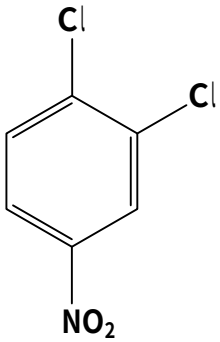
Molecular formula: $C_9H_6N_2O_2$
CAS: 91-08-7
ENCS: 3-2214
MW: 174.16
mp: 18.3°C [3]
bp: 129-133°C [8]
sw: Uncertain
Specific gravities: 1.22 [8]
logPow: Uncertain

[7-2] 4-Methyl-1,3-phenylene diisocyanate



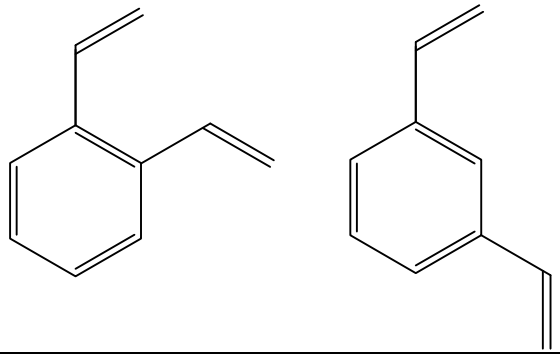
Molecular formula: $C_9H_6N_2O_2$
CAS: 584-84-9
ENCS: 3-2214
MW: 174.16
mp: 20.5°C [3]
bp: 251°C [3]
sw: Uncertain
Specific gravities: 1.2244g/cm^3 [3]
logPow: 0.21 [9]

[8] 1,2-Dichloro-4-nitrobenzene



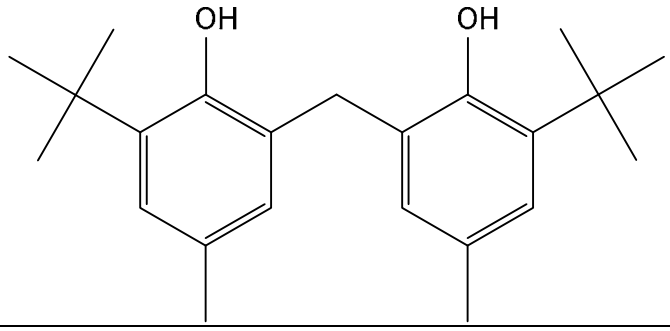
Molecular formula: $C_6H_3Cl_2NO_2$
CAS: 99-54-7
ENCS: 3-455
MW: 192
mp: 41.0°C [3]
bp: 255.5°C [3]
sw: 121mg/L (20°C) [5]
Specific gravities 1.4558g/cm^3 (75°C) [3]
logPow: 3.12 [10]

[9] Divinylbenzenes (Total of *m*-Divinylbenzene and *p*-Divinylbenzene)



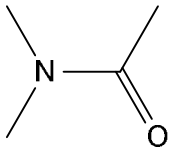
Molecular formula: $C_{10}H_{10}$
CAS: 108-57-6, 105-06-6
ENCS: 3-14
MW: 130.19
mp: -67°C [11)]
bp: 200°C [11)]
sw: Uncertain
Specific gravities: 0.93 (20°C, Water = 1) [11)]
logPow: Uncertain

[10] 6,6'-Di-*tert*-butyl-4,4'-dimethyl-2,2'-methylenediphenol



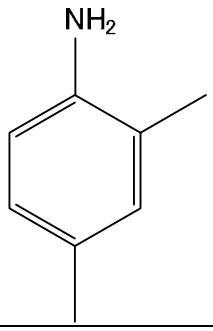
Molecular formula: $C_{23}H_{32}O_2$
CAS: 119-47-1
ENCS: 4-100
MW: 340.5
mp: 131°C [3)]
bp: 187°C (0.0053mmHg) [12)]
sw: 0.02mg/L [12)]
Specific gravities: 1.08g/cm^3 [12)]
logPow: 6.25 [12)]

[11] *N*,*N*-Dimethylacetamide



Molecular formula: C_4H_9NO
CAS: 127-19-5
ENCS: 2-723
MW: 87.12
mp: -19°C [3)]
bp: 163.59°C [3)]
sw: 1,000,000mg/L (25°C) [5)]
Specific gravities: 0.9372g/cm^3 (25°C) [3)]
logPow: -0.77 [3)]

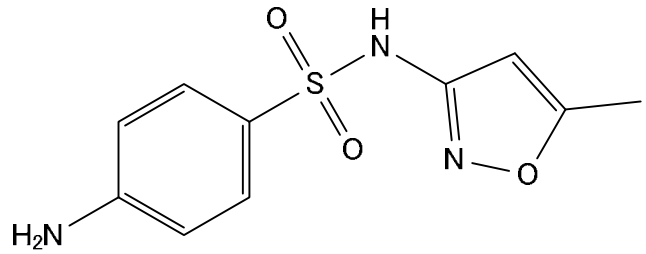
[12] 2,4-Dimethylaniline



Molecular formula: $C_8H_{11}N$
CAS: 95-68-1
ENCS: 3-129
MW: 121.18
mp: -13°C [3)]
bp: 215°C [3)]
sw: 1,390mg/L [5)]
Specific gravities: 0.9723g/cm^3 (25°C) [3)]
logPow: 1.68 [12)]

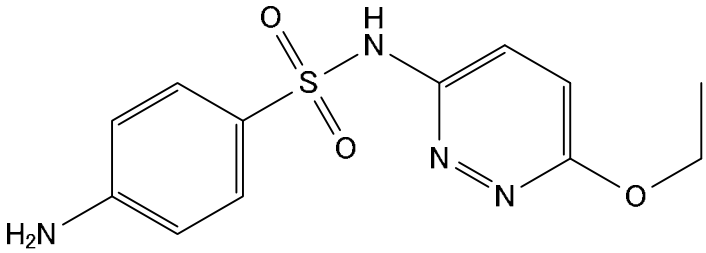
[13] Sulfamethoxazole, other Sulfanilamide compounds and 2,4-Diaminopyrimidine compounds

[13-1] Sulfamethoxazole



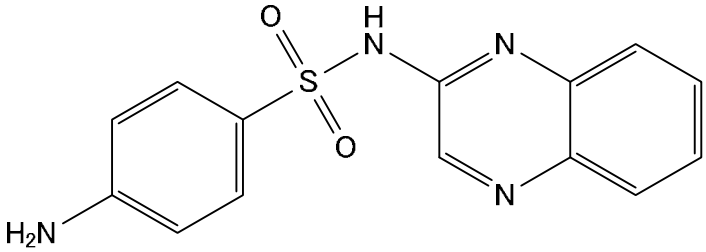
Molecular formula: $C_{10}H_{11}N_3O_3S$
CAS: 723-46-6
ENCS: No pertinence
MW: 253.28
mp: 167°C [3)]
bp: Uncertain
sw: 0.281g/kg (25°C) [3)]
Specific gravities: Uncertain
logPow: Uncertain

[13-2] Sulfaethoxypyridazine



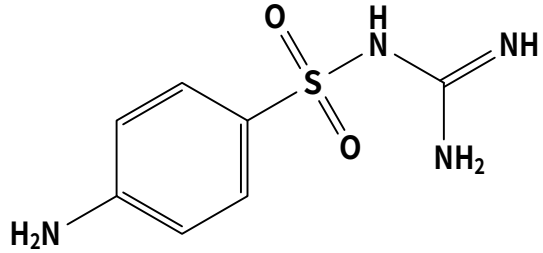
Molecular formula: $C_{12}H_{14}N_4O_3S$
CAS: 963-14-4
ENCS: No pertinence
MW: 294.33
mp: Uncertain
bp: Uncertain
sw: Uncertain
Specific gravities: Uncertain
logPow: Uncertain

[13-3] Sulfaquinoxaline



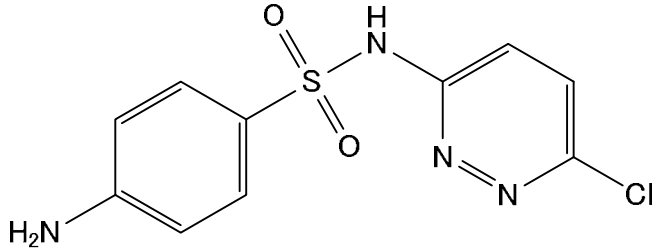
Molecular formula: $C_{14}H_{12}N_4O_2S$
CAS: 59-40-5
ENCS: 9-2260
MW: 300.34
mp: Uncertain
bp: Uncertain
sw: Uncertain
Specific gravities: Uncertain
logPow: Uncertain

[13-4] Sulfaguanidine



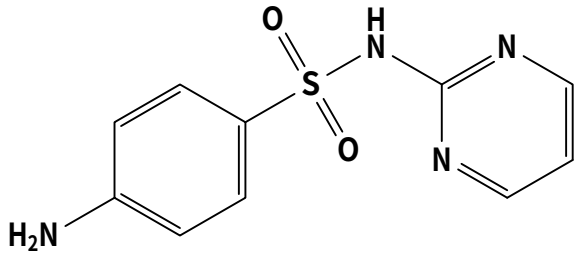
Molecular formula: $C_7H_{10}N_4O_2S$
CAS: 57-67-0
ENCS: 3-1977
MW: 214.24
mp: 191.5°C [3)]
bp: Uncertain
sw: Uncertain
Specific gravities: Uncertain
logPow: Uncertain

[13-5] Sulfachlorpyridazine



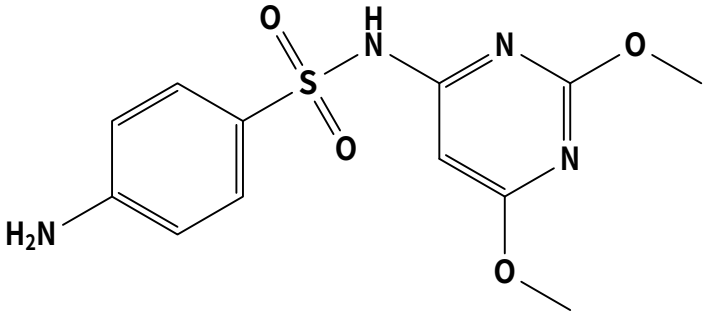
Molecular formula: $C_{10}H_9ClN_4O_2S$
CAS: 80-32-0
ENCS: 5-3835
MW: 284.72
mp: 187°C [3)]
bp: Uncertain
sw: Uncertain
Specific gravities: Uncertain
logPow: Uncertain

[13-6] Sulfadiazine



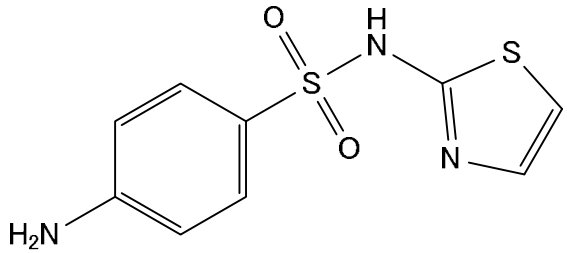
Molecular formula: $C_{10}H_{10}N_4O_2S$
CAS: 68-35-9
ENCS: No pertinence
MW: 250.28
mp: 275°C [4)]
bp: Uncertain
sw: Practically insoluble [4)]
Specific gravities: Uncertain
logPow: Uncertain

[13-7] Sulfadimethoxine



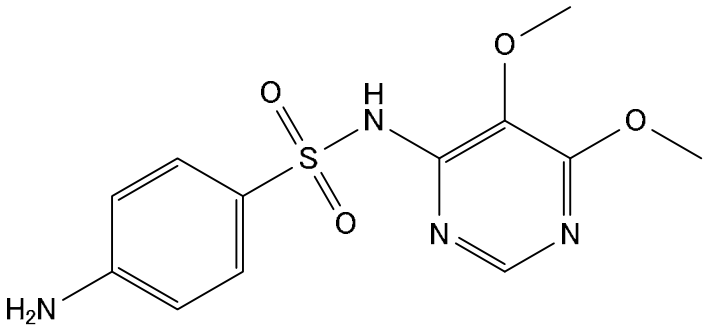
Molecular formula: $C_{12}H_{14}N_4O_4S$
CAS: 122-11-2
ENCS: 9-766
MW: 310.33
mp: 198-203°C [4)]
bp: Uncertain
sw: 0.53g/kg (20°C) [3)]
Specific gravities: Uncertain
logPow: Uncertain

[13-8] Sulfathiazole



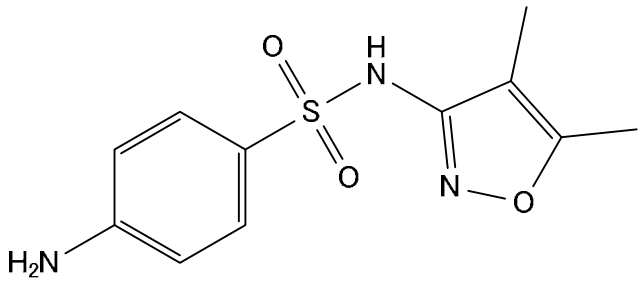
Molecular formula: $C_9H_9N_3O_2S_2$
CAS: 72-14-0
ENCS: No pertinence
MW: 255.32
mp: 200°C [3)]
bp: Uncertain
sw: 0.48g/kg (20°C) [3)]
Specific gravities: Uncertain
logPow: Uncertain

[13-9] Sulfadoxine



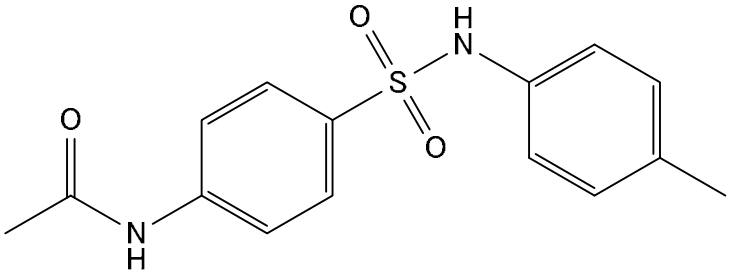
Molecular formula: $C_{12}H_{14}N_4O_4S$
CAS: 2447-57-6
ENCS: No pertinence
MW: 310.33
mp: Uncertain
bp: Uncertain
sw: Uncertain
Specific gravities: Uncertain
logPow: Uncertain

[13-10] Sulfatroxazole



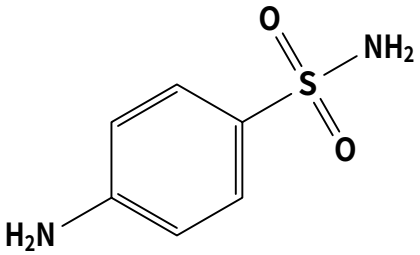
Molecular formula: $C_{11}H_{13}N_3O_3S$
CAS: 23256-23-7
ENCS: No pertinence
MW: 267.3
mp: Uncertain
bp: Uncertain
sw: Uncertain
Specific gravities: Uncertain
logPow: Uncertain

[13-11] Sulfanitran



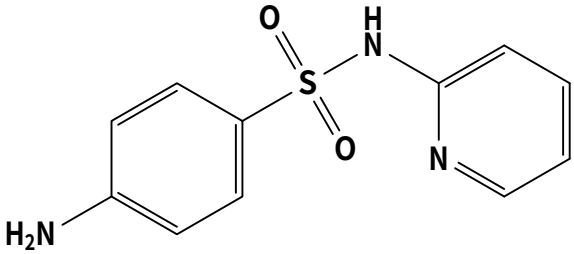
Molecular formula: $C_{14}H_{13}N_3O_5S$
CAS: 122-16-7
ENCS: No pertinence
MW: 335.34
mp: Uncertain
bp: Uncertain
sw: Uncertain
Specific gravities: Uncertain
logPow: Uncertain

[13-12] Sulfanilamide



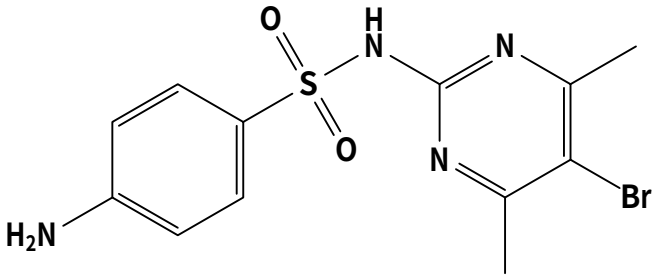
Molecular formula: $C_6H_8N_2O_2S$
CAS: 63-74-1
ENCS: 3-1973, 3-2179
MW: 172.2
mp: 162.2°C [3)]
bp: Uncertain
sw: 7.2g/kg (20°C) [3)]
Specific gravities: 1.08g/cm^3 (25°C) [3)]
logPow: -0.62 [13)]

[13-13] Sulfapyridine



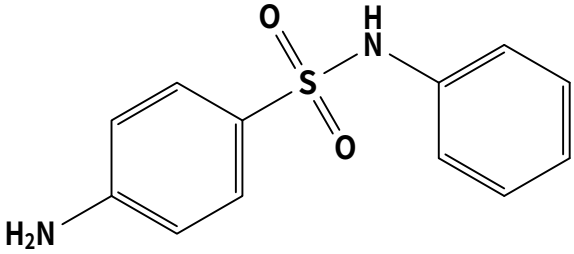
Molecular formula: $C_{11}H_{11}N_3O_3S$
CAS: 144-83-2
ENCS: No pertinence
MW: 249.29
mp: Uncertain
bp: Uncertain
sw: Uncertain
Specific gravities: Uncertain
logPow: Uncertain

[13-14] Sulfabromomethazine



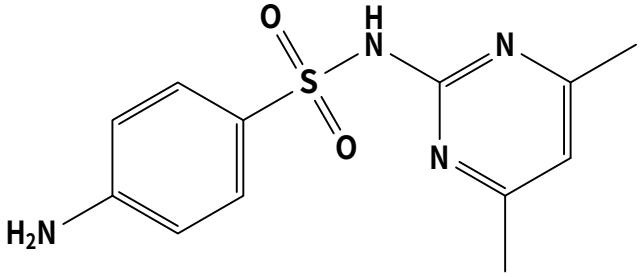
Molecular formula: $C_{12}H_{13}BrN_4O_2S$
CAS: 116-45-0
ENCS: No pertinence
MW: 357.23
mp: Uncertain
bp: Uncertain
sw: Uncertain
Specific gravities: Uncertain
logPow: Uncertain

[13-15] Sulfabenzamide



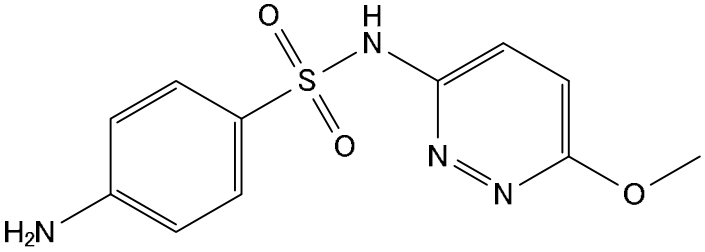
Molecular formula: $C_{13}H_{12}N_2O_3S$
CAS: 127-71-9
ENCS: No pertinence
MW: 276.31
mp: 181.5°C [3)]
bp: Uncertain
sw: Uncertain
Specific gravities: Uncertain
logPow: Uncertain

[13-16] Sulfadimidine



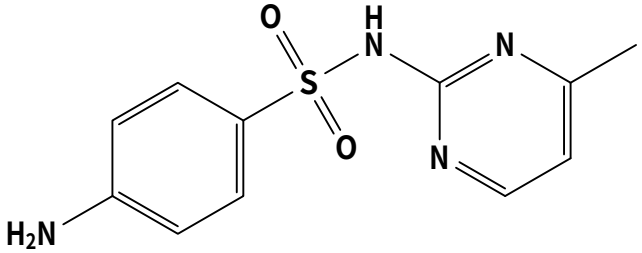
Molecular formula: $C_{12}H_{14}N_4O_2S$
CAS: 57-68-1
ENCS: 9-772
MW: 278.33
mp: 197°C [3)]
bp: Uncertain
sw: 0.53g/kg (20°C) [3)]
Specific gravities: Uncertain
logPow: Uncertain

[13-17] Sulfamethoxypyridiazine



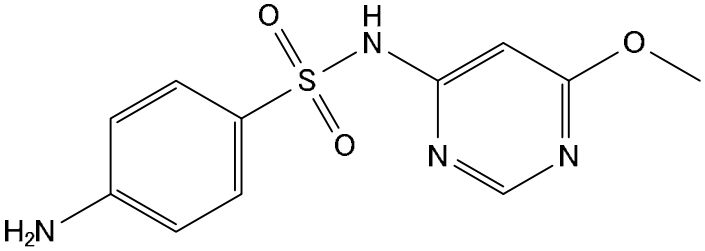
Molecular formula: $C_{11}H_{12}N_4O_3S$
CAS: 80-35-3
ENCS: No pertinence
MW: 280.3
mp: 182.5°C [3)]
bp: Uncertain
sw: Uncertain
Specific gravities: Uncertain
logPow: Uncertain

[13-18] Sulfamerazine



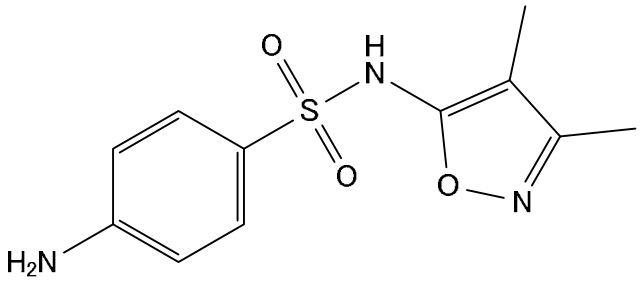
Molecular formula: $C_{11}H_{12}N_4O_2S$
CAS: 127-79-7
ENCS: No pertinence
MW: 264.3
mp: 238°C [3)]
bp: Uncertain
sw: Uncertain
Specific gravities: Uncertain
logPow: Uncertain

[13-19] Sulfamonomethoxine



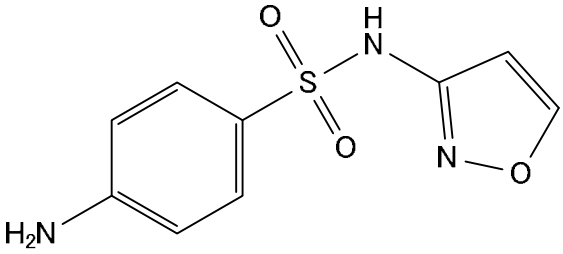
Molecular formula: $C_{11}H_{12}N_4O_3S$
CAS: 1220-83-3
ENCS: No pertinence
MW: 280.3
mp: Uncertain
bp: Uncertain
sw: Uncertain
Specific gravities: Uncertain
logPow: Uncertain

[13-20] Sulfisoxazole



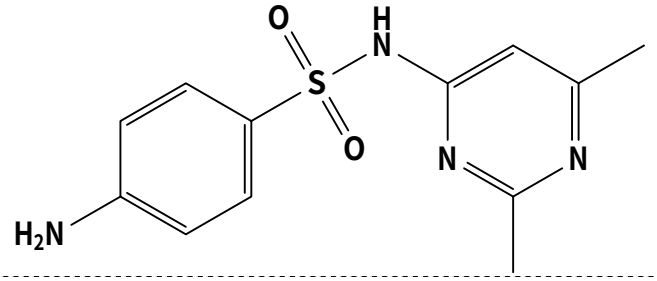
Molecular formula: $C_{11}H_{13}N_3O_3S$
CAS: 127-69-5
ENCS: No pertinence
MW: 267.3
mp: 195.0°C [3)]
bp: Uncertain
sw: 0.3g/kg (37°C) [3)]
Specific gravities: Uncertain
logPow: Uncertain

[13-21] Sulfisozole



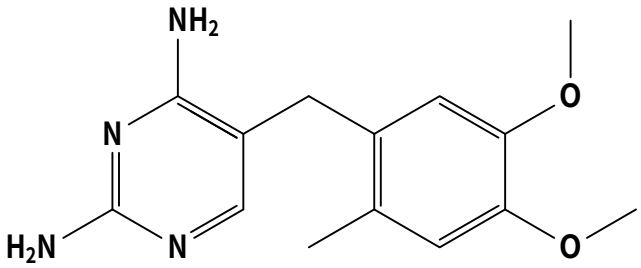
Molecular formula: $C_9H_9N_3O_3S$
CAS: 73247-57-1 (Sodium salt)
ENCS: No pertinence
MW: 239.25
mp: Uncertain
bp: Uncertain
sw: Uncertain
Specific gravities: Uncertain
logPow: Uncertain

[13-22] Sulfisomidine



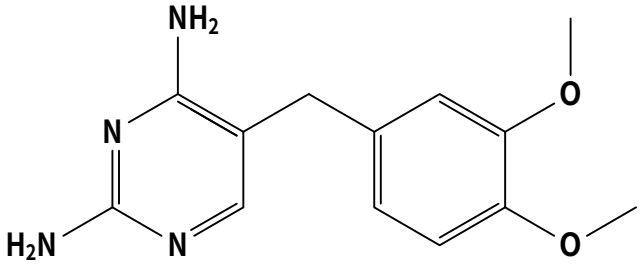
Molecular formula: $C_{12}H_{14}N_4O_2S$
CAS: 515-64-0
ENCS: No pertinence
MW: 278.33
mp: Uncertain
bp: Uncertain
sw: Uncertain
Specific gravities: Uncertain
logPow: Uncertain

[13-23] Ormetoprim



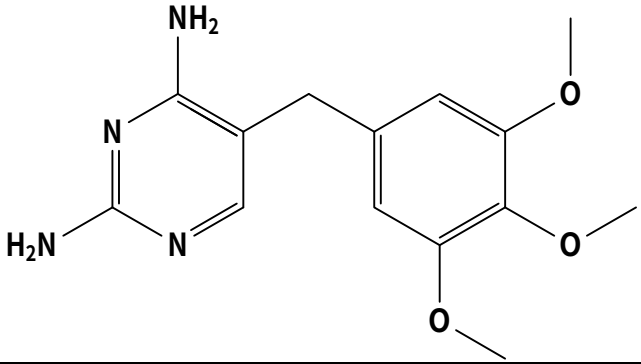
Molecular formula: $C_{14}H_{18}N_4O_2$
CAS: 6981-18-6
ENCS: No pertinence
MW: 274.32
mp: Uncertain
bp: Uncertain
sw: Uncertain
Specific gravities: Uncertain
logPow: Uncertain

[13-24] Diaveridine



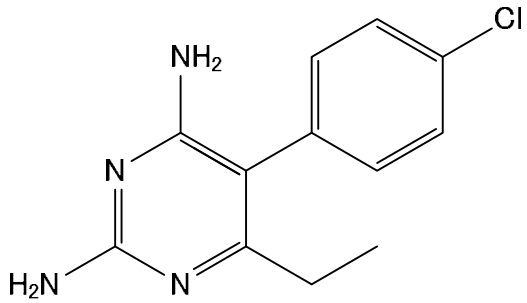
Molecular formula: $C_{13}H_{16}N_4O_2$
CAS: 5355-16-8
ENCS: 9-655
MW: 260.29
mp: Uncertain
bp: Uncertain
sw: Uncertain
Specific gravities: Uncertain
logPow: Uncertain

[13-25] Trimethoprim



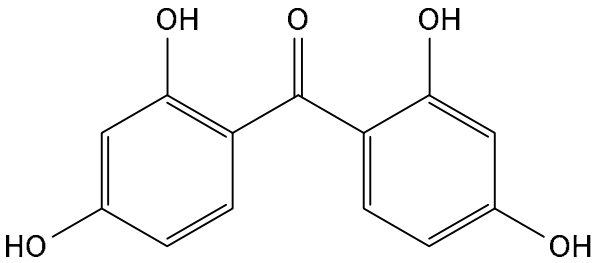
Molecular formula: $C_{14}H_{18}N_4O_3$
CAS: 738-70-5
ENCS: No pertinence
MW: 290.32
mp: 188°C [3)]
bp: Uncertain
sw: 0.4g/kg (25°C) [3)]
Specific gravities: Uncertain
logPow: Uncertain

[13-26] Pyrimethamine



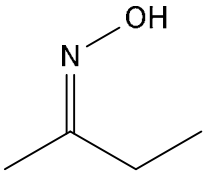
Molecular formula: $C_{12}H_{13}ClN_4$
CAS: 58-14-0
ENCS: 9-539, 9-696, 9-1124
MW: 248.71
mp: Uncertain
bp: Uncertain
sw: Uncertain
Specific gravities: Uncertain
logPow: Uncertain

[14] 2,2',4,4'-Tetrahydroxybenzophenone



Molecular formula: $C_{13}H_{10}O_5$
CAS: 131-55-5
ENCS: 4-131
MW: 246.22
mp: 198.8°C [3)]
bp: Uncertain
sw: Readily soluble [3)]
Specific gravity: 1.498g/cm^3 (Clystal) [14)]
logPow: Uncertain

[15] Butan-2-one oxime



Molecular formula: C_4H_9NO
CAS: 96-29-7
ENCS: 2-546
MW: 87.12
mp: -29.5°C [3)]
bp: 151.5°C [3)]
sw: Uncertain
Specific gravity: 0.9232g/cm^3 (20°C) [3)]
logPow: 0.63 [5)]

References

1) PRTR releases calcilation manual 3th Edition (2004)
2) International Chemical Safety Cards ICSC0499
3) Lide, D.R,(ed), CRC Handbook of Chemistry and Physics 95th Edition
4) Pharmaceuticals and Medical Devices Agency "Package Insert Information on Prescription Drugs" (http://www.info.pmda.go.jp/psearch/html/menu_tenpu_base.html)
5) Philip H. Howard, William M. Meylan, Handbook of Physical Properties of Organic Chemicals
6) Budavari, S.,(Ed), The Merck Index Ver.12:2
7) Maryadele J. O'Neil(Ed), The Merck Index 14th Edition
8) Hazardous Substances Data Bank (HSDB)
9) International Chemical Safety Cards ICSC0339
10) International Chemical Safety Cards ICSC0254
11) The Canadian Centre for Occupational Health and Safety (CCOHS) CCINFO
12) The OECD Screening Information Data Sets (SIDS)
13) Hansch,C.,A.Leo and D.Hoekman (1995): Exploring QSAR-Hydrophobic, Electronic and Steric Constants, American Chemical Society
14) Beilstein Handbook of Organic Chemistry

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 sampled and analysed by private analytical laboratories.

(1) Organisations responsible for sampling

Local communities	Organisations responsible for sampling*	Surveyed media		
		Surface water	Sedi-ment	Air
Hokkaido	Environmental Promotion Section, Environment Division, Department of Environment and Lifestyle, Hokkaido Prefectural Government and Hokkaido Research Organization Environmental and Geological Research Department 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	○	○	
Miyagi Pref.	Miyagi Prefectural Institute of Public Health and Environment	○		
Sendai City	Sendai City Institute of Public Health		○	
Akita Pref.	Akita Research Center for Public Health and Environment	○	○	
Ibaraki Pref.	Ibaraki Kasumigaura Environmental Science Center		○	○
Saitama Pref.	Center for Environmental Science in Saitama			○
Saitama City	Saitama City Institute of Health Science and Research			○
Chiba Pref.	Chiba Prefectural Environmental Research Center	○		○
Tokyo Met.	Tokyo Metropolitan Research Institute for Environmental Protection	○	○	
Kanagawa Pref.	Kanagawa Environmental Research Center			○
Yokohama City	Yokohama Environmental Science Research Institute	○	○	○
Niigata Pref.	Niigata Prefectural Institute of Public Health and Environmental Sciences	○		
Toyama Pref.	Toyama Prefectural Environmental Science Research Center			○
Ishikawa Pref.	Ishikawa Prefectural Institute of Public Health and Environmental Science	○		○
Yamanashi Pref	Yamanashi Institute for Public Health and Environment			○
Nagano Pref.	Nagano Environmental Conservation Research Institute			○
Aichi Pref.	Aichi Environmental Research Center	○	○	○
Nagoya City	Nagoya City Environmental Science Research Center	○		○
Mie Pref.	Mie Prefecture Health and Environment Research Institute	○	○	○
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.	Environment Preservation Division, Environment Management Office, Department of Environment, Agriculture, Forestry and Fisheries, Osaka Prefectural Government and Research Institute of Environment, Agriculture and Fisheries, Osaka Prefecture	○	○	
Osaka City	Osaka City Institute of Public Health and Environmental Sciences	○		
Hyogo Pref.	Hyogo Prefectural Agricultural Administration and Environment Division, Environment Bureau	○		
Kobe City	Health Division, Health Welfare Bureau, Kobe City Institute of Health	○		
Wakayama Pref.	Wakayama Prefectural Research Center of Environment and Public Health			○
Okayama Pref.	Okayama Prefectural Institute for Environmental Science and Public Health	○		
Yamaguchi Pref.	Yamaguchi Prefectural Institute of Public Health and Environment	○		○
Tokushima Pref.	Tokushima Prefectural Pablic Health, Pharmaceutical and Environmental Sciences Center			○
Kagawa Pref.	Kagawa Prefectural Research Institute for Environmental Sciences and Public Health	○	○	○
Fukuoka Pref.	Fukuoka Institute of Health and Environmental Sciences	○		○
Kitakyushu City	Kitakyushu City Institute of Environmental Sciences	○		○
Fukuoka City	Fukuoka City Institute for Hygiene and the Environment	○		
Saga Pref.	Saga Prefectural Environmental Research Center			○
Oita Pref.	Oita Prefectural Institute of Health and Environment, Life and Environment Department		○	○
Miyazaki Pref.	Miyazaki Prefectural Institute for Public Health and Environment			○

(Note) *: Organisations responsible for sampling are described by their official names in FY2014.

(2) Surveyed sites 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 sites and target chemicals for air are shown in Table 1-1-3 and Figure 1-1-2. The breakdown is summarized as follows.

To ensure more accurate data for areas susceptible to high concentrations in the general environment, Survey Points are selected and determined based on information regarding releases and emissions. New survey points utilized for the FY2014 surveys were finalized considering the emissions and releases reports submitted in accord with the PRTR, correlated with identification of geographical points with high particulate release volumes.

Surveyed media	Numbers of local communities	Numbers of target chemicals	Numbers of surveyed sites	Numbers of samples at a surveyed site
Surface water	25	8	36	1
Sediment	13	3	14	3
Air	25	6	29	3
All media	39	15	68	

Table 1-1-1 List of surveyed sites (surface water) and target chemicals in the Initial Environmental Survey in FY2014

Local communities	Surveyed sites	Target chemicals							
		[1]	[3]	[4]	[5]	[8]	[12]	[13]	[14]
Hokkaido	Suzuran-ohashi Bridge, Riv. Tokachi(Obihiro City)		○	○	○			○	
	Ishikarikakokyo Bridge, Mouth of Riv. Ishikari(Ishikari City)	○	○	○	○			○	
Sapporo City	Nakanuma of Riv.Toyohira(Sapporo City)	○					○		○
	Daiichishinkawa-bashi Bridge, Riv. Shin(Sapporo City)	○					○		○
Iwate Pref.	Riv. Toyosawa(Hanamaki City)		○						
Miyagi Pref.	Futatsuya-bashi Bridge, Riv. Hasama(Tome City)	○		○	○			○	○
	Sakura-hodoukyou Bridge, Riv.Shiroishi(Shibata Town)	○		○	○			○	○
Akita Pref.	Akita Canal(Akita City)	○	○	○	○	○	○	○	○
	Takemi-bashi Bridge, Riv. Omono (Daisen City)	○	○	○	○	○	○	○	○
Chiba Pref.	Asai-bashi Bridge, Riv.Yourou (Ichihara City)		○	○				○	○
Tokyo Met.	Mouth of Riv. Arakawa(Koto Ward)	○	○	○	○	○	○	○	○
	Mouth of Riv. Sumida(Minato Ward)	○	○	○	○	○	○	○	○
Yokohama City	Kamenoko-bashi Bridge, Riv.Tsurumi(Yokohama City)	○	○	○	○	○	○	○	○
	Yokohama Port	○	○	○	○	○	○	○	○
Niigata Pref.	Lower Riv. Shinano(Niigata City)					○			
Ishikawa Pref.	Mouth of Riv. Sai(Kanazawa City)	○				○	○		
Aichi Pref.	Nagoya Port, West of Shiomi Wharf*			○	○	○			
Nagoya City	Minatoshinbashi Bridge, Riv. Hori (Nagoya City)		○	○	○			○	
Mie Pref.	Yokkaichi Port					○	○		○
Shiga Pref.	Lake Biwa(center, offshore of Minamihira)						○		
	Lake Biwa(center, offshore of Karasaki)						○		
Kyoto Pref.	Miyazu Port					○	○		○
Osaka Pref.	Mouth of Riv. Yamato(Sakai City)		○	○	○	○	○	○	
Osaka City	Kema-bashi Bridge, Riv. Oh-kawa (Osaka City)		○				○		○
	Osaka Port		○				○		○
Hyogo Pref.	Offshore of Himeji				○				
Kobe City	Kobe Port(center)								○
Okayama Pref.	Sasagase-bashi Bridge, Riv. Sasagase (Okayama City)		○					○	○
	Offshore of Mizushima		○					○	○
Yamaguchi Pref.	Tokuyama Bay					○			
	Offshore of Hagi					○			
Kagawa Pref.	Takamatsu Port	○		○	○				
Fukuoka Pref.	Kabura-bashi Bridge, Riv. Raizan (Itoshima City)	○							○
	Offshore of Omuta	○							○
Kitakyushu City	Dokai Bay					○			
Fukuoka City	Hakata Bay	○	○	○	○	○	○	○	○

[1] 6-Acetyl-1,1,2,4,4,7-hexamethyltetralin, [3] Erythromycin, Clarithromycin and other Macrolide compounds, [4] Oxytetracycline, Chlortetracycline, other Tetracycline compounds and their metabolites, [5] 5-Chloro-2-(2,4-dichlorophenoxy)phenol (synonym: Triclosan), [8] 1,2-Dichloro-4-nitrobenzene, [12] 2,4-Dimethylaniline , [13] Sulfamethoxazole, other Sulfanilamide compounds and 2,4-Diaminopyrimidine compounds, [14] 2,2',4,4'-Tetrahydroxybenzophenone

(Note) *: "Nagoya Port, West of Shiomi Wharf" of Initial and Detailed Environmental Survey and "Nagoya Port" of Environmental Monitoring are the same point each.

Table 1-1-2 List of surveyed sites(sediment) and target chemicals in the Initial Environmental Survey in FY 2014

Local communities	Surveyed sites	Target chemicals		
		[8]	[10]	[12]
Sapporo City	Nakanuma of Riv.Toyohira(Sapporo City)			○
	Daiichishinkawa-bashi Bridge, Riv. Shin(Sapporo City)			○
Iwate Pref.	Riv. Toyosawa(Hanamaki City)	○	○	○
Sendai City	Hirose-ohashi Bridge, Riv. Hirose(Sendai City)	○	○	○
Akita Pref.	Akita Canal(Akita City)	○	○	○
Ibaraki Pref.	Tonekamome-ohashi Bridge, Mouth of Riv. Tone(Kamisu City)	○	○	○
Tokyo Met.	Mouth of Riv. Arakawa(Koto Ward)	○	○	○
Yokohama City	Yokohama Port	○	○	○
Aichi Pref.	Nagoya Port , West of Shiomi Wharf		○	
Mie Pref.	Yokkaichi Port	○	○	○
Shiga Pref.	Lake Biwa(center, offshore of Karasaki)	○	○	○
Osaka Pref.	Mouth of Riv. Yamato(Sakai City)	○	○	○
Kagawa Pref.	Takamatsu Port	○	○	○
Oita Pref.	Mouth of Riv. Oita(Oita City)	○	○	○

[8] 1,2-Dichloro-4-nitrobenzene, [10] 6,6'-Di-*tert*-butyl-4,4'-dimethyl-2,2'-methylenediphenol, [12] 2,4-Dimethylaniline

Figure 1-1-1 Surveyed sites (surface water and sediment) in the Initial Environmental Survey in FY 2014

Table 1-1-3 List of surveyed sites (air) and target chemicals in the Initial Environmental Survey in FY 2014

Local communities	Surveyed sites	Target chemicals					
		[2]	[6]	[7]	[9]	[11]	[15]
Hokkaido	Hokkaido Research Organization Environmental and Geological Research Department Institute of Environmental Sciences（Sapporo City)	○	○	○	○	○	○
Sapporo City	Sapporo City Institute of Public Health(Sapporo City)		○				○
Saitama Pref.	Center for Environmental Science in Saitama(Kazo City)	○	○		○		○
Saitama City	Saitama City Public Health Center(Saitama City)			○		○	
Chiba Pref.	Kimitsu Sakada Air Quality Monitoring Station(Kimitsu City)		○			○	
Kanagawa Pref.	Kanagawa Environmental Research Center(Hiratsuka City)	○		○			
Yokohama City	Totsuka Ward Yazawa Intersection Air Quality Monitoring Staiton(Yokohama City)			○	○		
Toyama Pref.	Takaoka Fushiki Air Quality Monitoring Station(Takaoka City)		○				
	Takaoka Toide Air Quality Monitoring Station(Takaoka City)					○	
Ishikawa Pref.	Ishikawa Prefectural Institute of Public Health and Environmental Science(Kanazawa City)	○	○	○	○	○	○
Yamanashi Pref.	Nirasaki Air Quality Monitoring Station(Nirasaki City)		○				
Nagano Pref.	Minowa Town Office(Minowa City)		○				
Aichi Pref.	Toyokawa City Government Building(Toyokawa City)					○	
Nagoya City	Chikusa Ward Heiwa Park(Nagoya City)		○				○
Mie Pref.	Mie Prefecture Health and Environment Research Institute(Yokkaichi City)	○	○	○	○		○
Kyoto City	Kyoto City Government Building(Kyoto 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)				○		
	Misome Community Center(Ube City)				○	○	
Tokushima Pref.	Tokushima Prefectural Public Health, Pharmaceutical and Environmental Sciences Center(Tokushima City)	○					
Kagawa Pref.	Takamatsu Joint Prefectural Government Building(Takamatsu City)	○					
Fukuoka Pref.	Fukuoka Institute of Health and Environmental Sciences(Dazaifu City)		○				○
	Omuta City Government Building(Omuta City)		○	○			○
Kitakyushu City	Kitakyushu Monitoring Station (Kitakyushu City)		○				○
Saga Pref.	Saga Prefectural Environmental Research Center(Saga City)	○	○	○	○	○	○
Oita Pref.	Oita City Misa Elementary School(Oita City)				○		
Miyazaki Pref.	Shinnobeoka Air Quality Monitoring Station(Nobeoka City)					○	
	Hososhima Community Center(hyuga City)	○					

[2] 3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate, [6] 2-Methoxyethyl acetate (synonym: Ethylene glycol monomethyl ether acetate), [7] Methyl-1,3-phenylene diisocyanate (synonym: *m*-Tolylene diisocyanate), [9] Divinylbenzenes (Total of *m*-Divinylbenzene and *p*-Divinylbenzene), [11] *N*,*N*-Dimethylacetamide, [15] Butan-2-one oxime

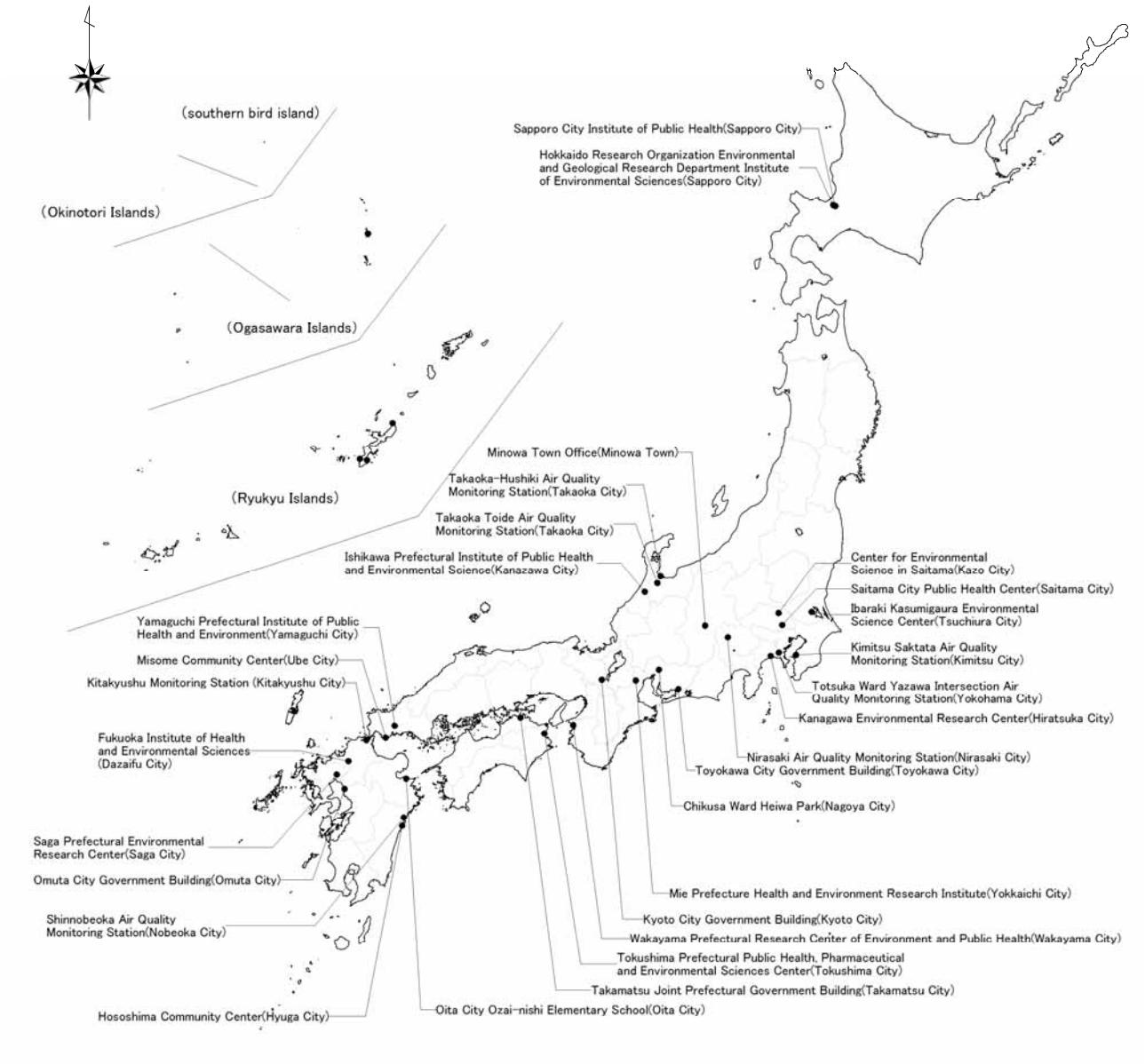


Figure 1-1-2 Surveyed sites (air) in the Initial Environmental Survey in FY 2014

(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 equipment. 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 (A)).

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 (B)).

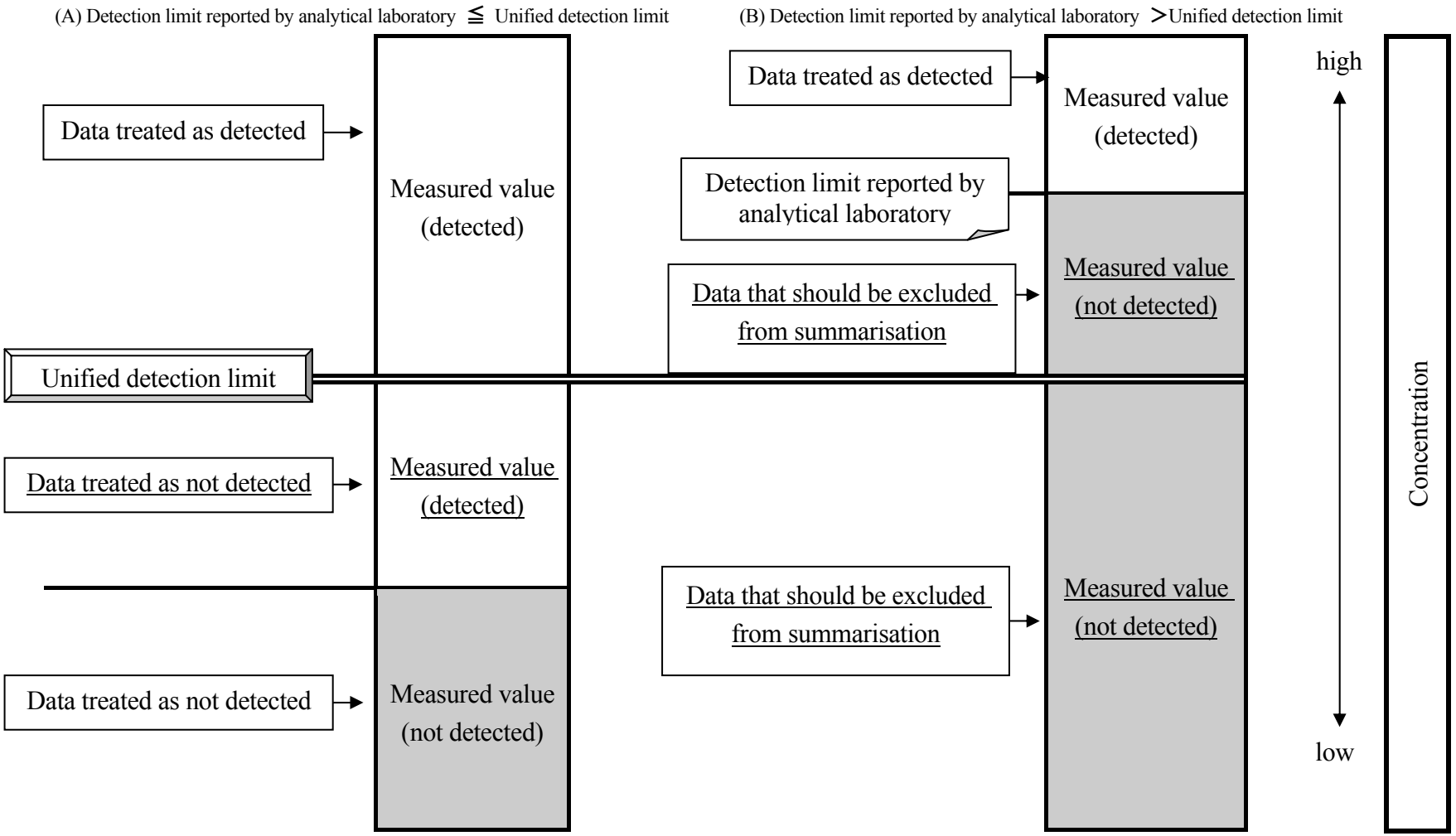
When the instrument detection limit (IDL) and the method detection limit (MDL) are given in the analytical method, which is described in reports on the investigation of the development of analytical methods for chemicals and adopted in the Initial Environmental Survey (hereafter, the Initial Environmental 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, 5 out of the 8 target chemicals (groups) were detected. Target chemicals were categorized by analytical methods such as structurally similar chemicals capable of simultaneous analyses.

・[1] 6-Acetyl-1,1,2,4,4,7-hexamethyltetralin: 14 of the 16 valid sites

・[3] Erythromycin, Clarithromycin and other Macrolide compounds

[3-1] Erythromycin: 6 of the 17 valid sites

[3-2] Clarithromycin: 13 of the 17 valid sites

[3-9] Roxithromycin: 6 of the 17 valid sites

[3-10] Clindamycin: 2 of the 17 valid sites

[3-11] Lincomycin: 5 of the 17 valid sites

・[5] 5-Chloro-2-(2,4-dichlorophenoxy)phenol (synonym: Triclosan): 16 of the 16 valid sites

・[13] Sulfamethoxazole, other Sulfanilamide compounds and 2,4-Diaminopyrimidine compounds

[13-1] Sulfamethoxazole: 11 of the 16 valid sites

[13-6] Sulfadiazine: 1 of the 16 valid sites

[13-12] Sulfanilamide: 10 of the 14 valid sites

[13-13] Sulfapyridine: 11 of the 16 valid sites

[13-22] Sulfisomidine: 1 of the 16 valid sites

[13-23] Ormetoprim: 1 of the 16 valid sites

[13-24] Diaveridine: 1 of the 16 valid sites

[13-25] Trimethoprim: 6 of the 16 valid sites

・[14] 2,2',4,4'-Tetrahydroxybenzophenone: 1 of the 21 valid sites

In sediment, 1 out of the 3 target chemicals were detected.

・[10] 6,6'-Di-*tert*-butyl-4,4'-dimethyl-2,2'-methylenediphenol: 9 of the 12 valid sites

In air, 2 out of the 6 target chemicals (groups) were detected.

・[7] Methyl-1,3-phenylene diisocyanate (synonym: *m*-Tolylene diisocyanate)

[7-2] Trimethoprim: 1 of the 9 valid sites

・[11] *N*,*N*-Dimethylacetamide: 7 of the 9 valid sites

Table 1-2 Summary of the detection ranges and the detection limits in the Initial Environmental Survey in FY 2014

No.	Target chemicals	Surface water [ng/L]		Sediment [ng/g-dry]		Air [ng/m^3]	
		Detection range and frequency	Detection limit	Detection range and frequency	Detection limit	Detection range and frequency	Detection limit
[1]	6-Acetyl-1,1,2,4,4,7-hexamethyltetralin	nd~230 14/16	0.85				
[2]	3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate*					nd 0/10	2
[3]	Erythromycin, Clarithromycin and other Macrolide compounds						
[3-1]	Erythromycin	nd~30 6/17	4.9				
[3-2]	Clarithromycin	nd~490 13/17	0.80				
[3-3]	Oleandomycin	nd 0/17	36				
[3-4]	Josamycin	nd 0/17	5.5				
[3-5]	Tylosin	nd 0/17	5.6				
[3-6]	Tacrolimus	nd 0/17	1.2				
[3-7]	12-Deoxyerythromycin (synonym: Erythromycin B)	nd 0/17	6.9				
[3-8]	Leucomycin A5	nd 0/17	5.8				
[3-9]	Roxithromycin	nd~47 6/17	6.5				
[3-10]	Clindamycin	nd~11 2/17	6.2				
[3-11]	Lincomycin	nd~17 5/17	5.0				
[4]	Oxytetracycline, Chlortetracycline, other Tetracycline compounds and their metabolites						
[4-1]	Oxytetracycline	nd 0/14	2.9				
[4-2]	Chlortetracycline	nd 0/16	4.6				
[4-3]	Tetracycline	nd 0/16	8.3				
[4-4]	Doxycycline	nd 0/16	20				
[4-5]	Isochlortetracycline	nd 0/16	6.4				
[5]	5-Chloro-2-(2,4-dichlorophenoxy)phenol (synonym: Triclosan)	0.76~93 16/16	0.13				
[6]	2-Methoxyethyl acetate*					nd 0/14	20
[7]	Methyl-1,3-phenylene diisocyanate (synonym: *m*-Tolylene diisocyanate)*						
[7-1]	2-Methyl-1,3-phenylene diisocyanate					nd 0/8	0.33
[7-2]	4-Methyl-1,3-phenylene diisocyanate					nd~1.3 1/9	0.24
[8]	1,2-Dichloro-4-nitrobenzene	nd 0/16	8.0	nd 0/11	0.61		
[9]	Divinylbenzenes (Total of *m*-Divinylbenzene and *p*-Divinylbenzene)*					nd 0/10	13
[10]	6,6'-Di-*tert*-butyl-4,4'-dimethyl-2,2'-methylenediphenol			nd~1.9 9/12	0.008		
[11]	*N*,*N*-Dimethylacetamide*					nd~400 7/9	2.2
[12]	2,4-Dimethylaniline	nd 0/17	14	nd 0/13	3.3		

No.	Target chemicals	Surface water [ng/L]		Sediment [ng/g-dry]		Air [ng/m^3]	
		Detection range and frequency	Detection limit	Detection range and frequency	Detection limit	Detection range and frequency	Detection limit
[13]	Sulfamethoxazole, other Sulfanilamide compounds and 2,4-Diaminopyrimidine compounds						
[13-1]	Sulfamethoxazole	nd~190 11/16	5.0				
[13-2]	Sulfaethoxypyridazine	nd 0/16	5.0				
[13-3]	Sulfaquinoxaline	nd 0/16	5.0				
[13-4]	Sulfaguanidine	nd 0/16					
[13-5]	Sulfachlorpyridazine	nd 0/16	5.0				
[13-6]	Sulfadiazine	nd~29 1/16	5.0				
[13-7]	Sulfadimethoxine	nd 0/16	5.0				
[13-8]	Sulfathiazole	nd 0/16	5.0				
[13-9]	Sulfadoxine	nd 0/16	5.0				
[13-10]	Sulfatroxazole	nd 0/16	5.0				
[13-11]	Sulfanitran	nd 0/16	20				
[13-12]	Sulfanilamide	nd~210 10/14	3.6				
[13-13]	Sulfapyridine	nd~290 11/16	5.0				
[13-14]	Sulfabromomethazine	nd 0/16	5.0				
[13-15]	Sulfabenzamide	nd 0/16	5.0				
[13-16]	Sulfadimidine	nd 0/16	5.0				
[13-17]	Sulfamethoxypyridiazine	nd 0/16	5.0				
[13-18]	Sulfamerazine	nd 0/16	5.0				
[13-19]	Sulfamonomethoxine	nd 0/16	5.0				
[13-20]	Sulfisoxazole	nd 0/16	5.0				
[13-21]	Sulfisozole	nd 0/16	5.0				
[13-22]	Sulfisomidine	nd~13 1/16	5.0				
[13-23]	Ormetoprim	nd~11 1/16	5.0				
[13-24]	Diaveridine	nd~10 1/16	5.0				
[13-25]	Trimethoprim	nd~61 1/16	5.0				
[13-26]	Pyrimethamine	nd 0/16	3.8				

No.	Target chemicals	Surface water [ng/L]		Sediment [ng/g-dry]		Air [ng/m^3]	
		Detection range and frequency	Detection limit	Detection range and frequency	Detection limit	Detection range and frequency	Detection limit
[14]	2,2',4,4'-Tetrahydroxybenzophenone	nd~13 1/21	12				
[15]	Butan-2-one oxime					nd 0/10	13

(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 was 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. 3 samples were measured for a site or area, and the detection in more than one out of samples from a site or area can be defined as one detected site or 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)* connote target substances or points selected for survey in light of documentation or submittals regarding emissions.