

Results of 1998 Research on Effects of Endocrine Disrupting Chemicals on Wildlife (Carp, Water/Sediment-1)

No.			1										2	3					4		5	6													
SPEED'98 No.			2										4	12					14		15	16													
Specimen	No.	Specimen collection site	Polychlorinated biphenyls (PCBs)										Hexachlorobenzene (HCB)	Hexachlorocyclohexane					Chlordane		Oxychlordane	trans-Nonachlor	cis-Nanachlor												
			Chlorinated biphenyl	Dichloro biphenyl	Trichloro biphenyl	Tetrachloro biphenyl	Pentachloro biphenyl	Hexachloro biphenyl	Heptachloro biphenyl	Octachloro biphenyl	Nonachloro biphenyl	Decachloro biphenyl		PCB total*	α -HCH	β -HCH	γ -HCH	δ -HCH	HCH total*	cis-Chlordane				trans-Chlordane											
Unit			$\mu\text{g/L}$																																
Water	1	Hamura-seki	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0	<0.025	<0.025	<0.025	-	-	0	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
	2	Haijima-bashi	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0	<0.025	<0.025	<0.025	-	-	0	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
	3	Tamagawara-bashi	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0	<0.025	<0.025	<0.025	-	-	0	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
	4	Denenchofu-seki	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0	<0.025	<0.025	<0.025	-	-	0	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
	5	Akikawa	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0	<0.025	<0.025	<0.025	-	-	0	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
	6	Asakawa	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0	<0.025	<0.025	<0.025	-	-	0	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
	7	Inbanuma	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0	<0.05	<0.05	<0.05	<0.05	<0.05	0	<0.05	<0.05	<0.05	<0.05	<0.05	-
	8	Teganuma	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0	<0.05	<0.05	<0.05	<0.05	<0.05	0	<0.05	<0.05	<0.05	<0.05	<0.05	-
Unit			$\mu\text{g/kg-dry}$																																
Sediment	1	Hamura-seki	<0.02	<0.02	<0.02	0.55	0.57	0.11	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	1.2	<5	<5	<5	-	-	<5	<5	<5	<5	<5	<5	<5	
	2	Haijima-bashi	<0.02	<0.02	0.06	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.08	<5	<5	<5	-	-	<5	<5	<5	<5	<5	<5	<5
	3	Tamagawara-bashi	<0.02	<0.02	0.02	0.16	0.19	0.24	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.61	<5	<5	<5	-	-	<5	<5	<5	<5	<5	<5	<5
	4	Denenchofu-seki	<1.0	<1.0	0.4	0.4	1.4	1.2	0.3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	3.7	<5	<5	<5	-	-	<5	<5	<5	<5	<5	<5	<5
	5	Akikawa	<0.02	<0.02	0.38	0.37	0.43	0.15	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	1.3	<5	<5	<5	-	-	<5	<5	<5	<5	<5	<5	<5
	6	Asakawa	<0.02	<0.02	0.41	0.40	0.24	0.10	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	1.2	<5	<5	<5	-	-	<5	<5	<5	<5	<5	<5	<5
	7	Inbanuma	<0.02	0.82	0.39	2.3	2.2	1.3	0.16	0.28	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	7.5	<5	<5	<5	-	-	<5	<5	<5	<5	<5	<5	<5
	8	Teganuma	<0.02	0.69	6.6	5.6	5.7	3.4	0.30	<0.02	0.13	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	22	<5	<5	<5	-	-	<5	<5	<5	<5	<5	<5	<5

* Calculated on the assumption that values below the limit of detection are counted as 0.

** The above data are partially based upon the "Results of 1998 Endocrine Disrupting Chemicals Surveillance at Public Water Areas" compiled by the Ministry of Construction.

Results of 1998 Research on Effects of Endocrine Disrupting Chemicals on Wildlife (Carp, Water/Sediment-2)

No.			7		8				9	10	11	12	13	14	15	16	17	18	19	20		
SPEED'98 No.			18		19				23	25	26	43	33	34			9	11	35	36		
Specimen	No.	Specimen collection site	DDT		DDE and DDD				Dieldrin	Heptachlor	Heptachlor epoxide	Benzo(a)pyrene	Tributyltin	Triphenyltin	Dibutyltin	Monobutyltin	Atrazine	CAT (Simazine)	Trifluralin	Alkyl phenol		
			o,p'-DDT	p,p'-DDT	o,p'-DDE	p,p'-DDE	o,p'-DDD	p,p'-DDD												Nonyl phenol	4-t-Octyl phenol	4-n-Octyl phenol
Unit			$\mu\text{g/L}$																			
Water	1	Hamura-seki	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.01	<2	<4	<7	<7	<0.05	<0.05	<0.05	<0.03	<0.03	<0.03
	2	Haijima-bashi	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.01	<2	<4	<7	<7	<0.05	<0.05	<0.05	0.20	<0.03	<0.03
	3	Tamagawara-bashi	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.01	<2	<4	<7	10	<0.05	<0.05	<0.05	0.17	0.04	<0.03
	4	Denenchofu-seki	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.01	<2	<4	<7	7	<0.05	<0.05	<0.05	0.25	<0.03	<0.03
	5	Akikawa	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.01	<0.005	<0.001	<7	7	<0.05	<0.05	<0.05	<0.05	0.02	<0.01
	6	Asakawa	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.01	<0.005	<0.001	<7	<7	<0.05	<0.05	<0.05	0.42	0.12	<0.01
	7	Inbanuma	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.005	<0.001	-	-	<0.05	<0.05	<0.05	1.3	0.23	<0.01
	8	Teganuma	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.005	<0.001	-	-	<0.05	<0.05	<0.05	1.1	0.23	<0.01
Unit			$\mu\text{g/kg-dry}$																			
Sediment	1	Hamura-seki	<5	<5	<5	<5	<5	<5	<5	<5	<5	45	<1	<1	<2	<2	<5	<5	<5	160	<5	<5
	2	Haijima-bashi	<5	<5	<5	<5	<5	<5	<5	<5	<5	1	<1	<1	<2	<2	<5	<5	<5	<50	<5	<5
	3	Tamagawara-bashi	<5	<5	<5	<5	<5	<5	<5	<5	<5	32	<1	<1	<2	3	<5	<5	<5	120	<5	<5
	4	Denenchofu-seki	<5	<5	<5	<5	<5	<5	<5	<5	<5	39	0.4	<0.1	2	4	<5	<5	<5	33	<1.0	<1.0
	5	Akikawa	<5	<5	<5	<5	<5	<5	<5	<5	<5	57	0.1	<0.1	<2	<2	<5	<5	<5	<50	<5	<5
	6	Asakawa	<5	<5	<5	<5	<5	<5	<5	<5	<5	100	0.4	<0.1	<2	3	<5	<5	<5	<50	<5	<5
	7	Inbanuma	<5	<5	<5	<5	<5	<5	<5	<5	<5	100	69	2.0	<2	<2	<5	<5	<5	<50	<5	<5
	8	Teganuma	<5	<5	<5	<5	<5	<5	<5	<5	<5	150	5.4	0.1	8	7	<5	<5	<5	85	<5	<5

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Results of 1998 Research on Effects of Endocrine Disrupting Chemicals on Wildlife (Carp, Water/Sediment-3)

		No. 21	22	23	24	25	26	27	28										30	32							
		SPEED'98 No. 37	38	39	40	42	45		66																		
Specimen	No.	Specimen collection site	BisphenolA	Di-(2-ethylhexyl) phthalate	Butyl benzyl phthalate	Di-n-butyl-phthalate	Diethyl phthalate	Di-(2-ethylhexyl) adipate	Styrene monomer	Styrene dimers and trimers										17β-estradiol	Ethinyl estradiol						
										Styrene dimers*	1,3-Diphenylpropane	cis-1,2-Diphenylcyclobutane	trans-1,2-Diphenylcyclobutane	2,4-Diphenyl-1-butene	Styrene trimers*	2,4,6-Triphenyl-1-hexane	1a-phenyl-4a-(1-phenylethyl) tetralin	1a-phenyl-4e-(1-phenylethyl) tetralin	1e-phenyl-4a-(1-phenylethyl) tetralin			1a-phenyl-4e-(1-phenylethyl) tetralin	1e,3e,5a-Triphenylcyclohexane	1e,3e,5e-Triphenylcyclohexane			
Unit		μg/L																									
Water	1	Hamura-seki	0.02	<0.2	<0.2	<0.2	<0.2	<0.01	<0.01	0	<0.01	<0.01	<0.01	<0.01	0	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0007	<0.001	
	2	Hajima-bashi	0.04	<0.2	<0.2	<0.2	<0.2	<0.01	<0.01	0	<0.01	<0.01	<0.01	<0.01	0	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0002	<0.001	
	3	Tamagawara-bashi	0.05	<0.2	<0.2	<0.2	<0.2	<0.01	<0.01	0	<0.01	<0.01	<0.01	<0.01	0	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0055	<0.001	
	4	Denenchofu-seki	0.05	<0.2	<0.2	0.2	<0.2	<0.01	<0.01	0	<0.01	<0.01	<0.01	<0.01	0	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0020	<0.001	
	5	Akikawa	<0.01	<0.3	<0.1	<0.3	<0.1	<0.01	0.02	0	<0.01	<0.01	<0.01	<0.01	0	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.001	<0.001	
	6	Asakawa	0.04	<0.3	<0.1	<0.3	<0.1	<0.01	0.01	0	<0.01	<0.01	<0.01	<0.01	0	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	0.001	<0.001	
	7	Inbanuma	0.01	<0.3	<0.1	<0.3	<0.1	<0.01	0.01	0	<0.01	<0.01	<0.01	<0.01	0	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	0.005	<0.001	
	8	Teganuma	<0.01	<0.3	<0.1	<0.3	<0.1	<0.01	0.02	0	<0.01	<0.01	<0.01	<0.01	0	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	0.008	<0.001	
Unit		μg/kg-dry																									
Sediment	1	Hamura-seki	<5	140	<10	37	<10	<10	<1	0	<1	<1	<1	<1	0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.43	0.15
	2	Hajima-bashi	<5	36	<10	<25	<10	<10	<1	0	<1	<1	<1	<1	0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.066	<0.01
	3	Tamagawara-bashi	<5	320	<10	32	<10	14	<1	0	<1	<1	<1	<1	0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.14	<0.01
	4	Denenchofu-seki	4.1	500	10	29	<10	<10	<1	0	<1.0	<1.0	<1.0	<1.0	0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.3	0.09
	5	Akikawa	<5	110	<10	<25	<10	<10	<1	0	<1	<1	<1	<1	0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.012	<0.01
	6	Asakawa	<5	610	<10	<25	<10	<10	<1	0	<1	<1	<1	<1	0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.12	<0.01
	7	Inbanuma	22	4,000	<10	78	<10	<10	<1	0	<1	<1	<1	<1	2.1	<1	<1	<1	<1	<1	2.1	<1	<1	<1	<1	1.2	0.08
	8	Teganuma	9.5	2,700	<10	110	<10	22	<1	0	<1	<1	<1	<1	0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1.0	0.34

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