

大気・粉塵／水質 標準物質総合カタログ

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あくまでご参考として下さい。

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大気

Trace Elements in Road Dust		BCR 723	25g
Pd		6.0	
Pt		81.3	
Rh		12.8	

単位はμ g/kg

粉塵

Urban particulate matter SRM1648a 2g 単位のない値はmg/kg			
Aluminum	3.43%	Lead	0.66%
Antimony	45.4	Magnesium	0.81%
Arsenic	115.5	Manganese	790
Boron	161	Nickel	81.1
Bromine	502	Potassium	1.06%
Cadmium	73.7	Rubidium	51
Calcium	5.84%	Samarium	4.3
Carbon (total)	(12.7%)	Scandium	(6 to 120)
Carbon(element)	(10.5%)	Selenium	28.4
Carbon (organic)	(2.3%)	Silicon	12.80%
Cerium	54.6	Silver	6
Cesium	3.4	Sodium	4240
Chlorine	4543	Strontium	215
Chromium	402	Sulfur	5.51%
Cobalt	17.93	Thorium	(7 to 107)
Copper	610	Titanium	4021
Hafnium	(5.2)	Tungsten	4.6
Iron (total)	3.92%	Vanadium	127
Lanthanum	39	Zinc	4800

Urban Dust	BCR 605	15g	単位はμ g/kg
Trimethylead(TriML)		7.9	

自動車排出粒子		NIES CRM No.8	7g	単位のない値はμ g/g	
Ca	0.53 wt.%	Pb	219	Sb	6.0
Al	0.33 wt.%	Sr	89	Co	3.3
Na	0.192 wt.%	Cu	67	As	2.6
K	0.115 wt.%	Cr	25.5	Cd	1.1
Zn	0.104 wt.%	Ni	18.5		
Mg	0.101 wt.%	V	17		

参考値： P, Br, Mo, Rb, Ce, Se, La, Sc, Th, Cs, Ag, Sm, Eu, Lu

LGC6180 Pulverised fuel ash Extractable and total metals (5 x 50 g)						
Assessed values			単位はmg/kg			
Al	25700		Cr	43.8	Na	1230
As	91.7		Cu	67.9	Ni	48.4
Ba	676		K	6170	Pb	48.6
Ca	6415		Mg	3360	V	105
Co	18.5		Mn	259	Zn	115

Indicative values for B, Be, Fe, Hg, Li, Sb, Se, Ti

Total metal content

Indicative values for Al, As, Ba, Be, Ca, Co, Cr, Cu, Fe, K, Li, Mg, Mn, Mo, Na, Ni, Pb, Sb, Se, Sn, Ti, V, Zn

NIST1650b Diesel particulate matter (200mg)			
単位はmg/kg			
Naphthalene	5.07 ± 0.43	Triphenylene	9.17 ± 0.94
1-Methylnaphthalene	1.51 ± 0.12	Benzo(a)fluoranthene	0.370 ± 0.029
2-Methylnaphthalene	3.05 ± 0.56	Benzo(b)fluoranthene	6.77 ± 0.84
Phenanthrene	69.5 ± 1.9	Benzo(j)fluoranthene	3.24 ± 0.42
Anthracene	7.67 ± 0.47	Benzo(k)fluoranthene	2.37 ± 0.21
1-Methylphenanthrene	28.3 ± 1.5	Benzo(a)pyrene	1.17 ± 0.09
2-Methylphenanthrene	70.7 ± 2.7	Benzo(e)pyrene	6.30 ± 0.50
3-Methylphenanthrene	55.1 ± 1.9	Perylene	0.165 ± 0.032
9-Methylphenanthrene	35.1 ± 1.9	Benzo(ghi)perylene	5.91 ± 0.18
Fluoranthene	47.3 ± 0.8	Indeno(1,2,3-cd)pyrene	4.44 ± 0.28
Pyrene	43.4 ± 1.6	Dibenz(a,c)anthracene	0.438 ± 0.043
Benzo(ghi)fluoranthene	10.8 ± 1.0	Dibenz(a,h)anthracene	0.365 ± 0.071
Benzo(c)phenanthrene	2.51 ± 0.29	Dibenz(a,j)anthracene	0.387 ± 0.051
Benz(a)anthracene	6.18 ± 0.30	Benzo(b)chrysene	0.290 ± 0.020
Chrysene	13.3 ± 1.1	Picene	0.499 ± 0.061
単位はμ g/kg			
9-Nitroanthracene	5890 ± 310	6-Nitrochrysene	45.5 ± 1.9
1-Nitropyrene	18200 ± 200	6-Nitrobenzo(a)pyrene	1390 ± 100
7-Nitrobenz(a)anthracene	967 ± 42	1,6-Dinitropyrene	84.0 ± 3.0

Reference values for selected PAHs, Nitro-PAHs.

Indicative values for for particle-size characteristics and specific surface area

Diesel particulate extract – PAH SRM1975 (4x1.2mL) 単位はmg/kg			
保証値		保証値	
Phenanthrene	8.00	Triphenylene	2.38
Fluoranthene	13.5	Benzo[b]fluoranthene	3.20
Benzo[a]anthracene	0.092	Benzo[k]fluoranthene	0.174
Chrysene	1.950	Benzo[e]pyrene	0.268
参考値		参考値	
Naphthalene	0.67	1,8-Dimethylphenanthrene	0.026
1-Methylnaphthalene	0.39	2,6-Dimethylphenanthrene	0.14
2-Methylnaphthalene	0.69	2,7-Dimethylphenanthrene	0.127
Biphenyl	0.24	3,5and3,6-Dimethylphenanthrene	0.090
Fluorene	0.110	Benzo[ghi]fluoranthene	4.3
1-Methylphenanthrene	0.50	Pyrene	0.42
2-Methylphenanthrene	1.7	1-,3-and7-Methylfluoranthene	0.092
3-Methylphenanthrene	0.88	Benzo[c]phenanthrene	0.51
4and9-Methylphenanthrene	0.25	Benzo[ghi]perylene	0.038
1,2-Dimethylphenanthrene	0.017	Indeno[1,2,3-cd]pyrene	0.12
1,6-2,5-,and2,9-Dimethylphenanthrene	0.14	Dibenz[a,c]anthracene and	0.079
1,7-Dimethylphenanthrene	0.122	Dibenz[a,h]anthracene	
1-Nitronaphthalene	0.013	4-Nitropyrene	0.07
2-Nitronaphthalene	0.039	7-Nitrobenz[a]anthracene	1.62
4-Nitrobiphenyl	0.05	6-Nitrochrysene	0.782
9-Nitroanthracene	1.36	6-Nitrobenzo[a]pyrene	0.641
9-Nitrophenanthrene	0.27	1-Nitrobenzo[e]pyrene	0.83
2-Nitrofluoranthene	0.06	3-Nitrobenzo[e]pyrene	2.2
3-Nitrofluoranthene	1.47	1,3-Dinitropyrene	0.60
8-Nitrofluoranthene	0.25	1,6-Dinitropyrene	1.39
1-Nitropyrene	16.4	1,8-Dinitropyrene	1.55

Diesel particulate matter – PAH SRM2975 (1g) 単位はmg/kg			
保証値		保証値	
Phenanthrene	17.0	Benzo[j]fluoranthene	0.82
Fluoranthene	26.6	Benzo[k]fluoranthene	0.678
Pyrene	0.90	Benzo[e]pyrene	1.11
Benzo[a]anthracene	0.317	Benzo[a]pyrene	0.0522
Chrysene	4.56	Benzo[ghi]perylene	0.498
Triphenylene	5.22		
参考値		参考値	
1-Methylnaphthalene	0.89	2-Methylpyrene	0.040
2-Methylnaphthalene	2.0	4-Methylpyrene	0.022
3-Methylnaphthalene	1.0	Benzo[c]phenanthrene	1.0
4and9-Methylphenanthrene	0.44	Benzo[a]fluoranthene	0.06
1,2-Dimethylphenanthrene	0.05	Benzo[b]fluoranthene	11.5
1,6-1,7-2,5-,and2,9-Dimethylphenanthrene	0.57	Perylene	0.054
1,8-Dimethylphenanthrene	0.06	Indeno[1,2,3-cd]pyrene	1.4
2,6-Dimethylphenanthrene	0.25	Indeno[1,2,3-cd]fluoranthene	1.1
2,7-Dimethylphenanthrene	0.23	Dibenz[a,j]anthracene	0.37
3,6-Dimethylphenanthrene	0.18	Pentaphene	0.038
Anthracene	0.038	Benzo[b]chrysene	0.08
Benzo[ghi]fluoranthene	10.2	Picene	1.0
8-Methylfluoranthene	0.068	Coronene	1.1
1-,3-and7-Methylfluoranthene	0.53	Dibenz[a,c]anthracene / Dibenz[a,h]anthracene	0.52

Welding dust loaded on a filter		BCR 545	25g
Cr(VI)		40.2	
total leachable Cr		39.5	

単位はμ g/kg

Indoor Dust		SRM2583	8g	単位はmg/kg
As		7.0		
Ca		7.3		
Cr		90		
Pb		85.9		
Hg		1.56		

Indoor Dust		Nominal 1% Lead	SRM2584	8g	単位はmg/kg
保証値			保証値		
As	17.4		Pb	9761	
Ca	10.0		Hg	5.20	
Cr	135.0				
参考値			参考値		
Al		23200	Mg	15900	
Ca	63300		Na	27700	
Fe	16400		P	2000	
K	9500		Ti	4200	
La	19		Zn	2580	

情報値として23元素あり。

Air Particulate on Filter Media		SRM2783	2filter+2blank
保証値 単位はng		参考値 単位はng	
Ce	23.4	Th	3.23
Rb	24.0	U	1.234
S	1050	W	5.0
Sc	3.54		
Si	58600		
Sm	2.04		

ECRM-B 877-1 Furnace dust - powder		100g			
保証値 Year of issue: 1977					
Si	1.08 ± 0.05 %	Cr	0.017 ± 0.001 %	Pb	1.00 ± 0.03 %
Al	0.044 ± 0.003 %	F	0.78 ± 0.05 %	S	0.18 ± 0.01 %
Ca	3.23 ± 0.11 %	Fe	62.07 ± 0.35 %	Ti	0.032 ± 0.003 %
Mg	0.28 ± 0.01 %	K	0.058 ± 0.003 %	V	0.029 ± 0.003 %
P	0.18 ± 0.01 %	Mn	1.37 ± 0.02 %	Zn	1.16 ± 0.04 %
As	0.014 ± 0.002 %	Na	0.23 ± 0.02 %		
C	0.83 ± 0.02 %	Ni	0.010 ± 0.001 %		

ECRM-F 876-1 Electric furnace dust 100g					
保証値		Year of issue: 1977			
Si	1.72 ± 0.04 %	C	0.26 ± 0.01 %	Na	1.98 ± 0.07 %
SiO2	3.67%	Cd	0.13 ± 0.01 %	Na2O	2.67%
Al	0.34 ± 0.03 %	Cl	3.63 ± 0.08 %	Ni	0.034 ± 0.003 %
Al2O3	0.63%	Cr	0.17 ± 0.01 %	Pb	7.82 ± 0.23 %
Ca	3.43 ± 0.13 %	F	0.24 ± 0.03 %	S	0.87 ± 0.07 %
CaO	4.80%	Fe	24.85 ± 0.17 %	Sn	0.094 ± 0.004 %
Mg	1.31 ± 0.03 %	K	1.63 ± 0.06 %	Ti	0.048 ± 0.004 %
MgO	2.17%	K2O	1.96%	TiO2	0.08%
P	0.128 ± 0.007 %	Mn	2.84 ± 0.04 %	Zn	23.29 ± 0.32 %
As	0.023 ± 0.001 %	MnO	3.67%		

雨水

Simulated Rain Water (low contents) ECRM-CA408 (95mL)	
Mass concentration	
Ammonium	0.910
Cl	1.96
Fluoride	0.194
Mg	0.145
NO3	2.01
Ortho-phosphate	1.00
SO4	1.46
Electrochemical property	
Conductivity (20°C)	18.7
pH(20°C)	6.3

単位はmg/L

Fresh Water

ERM-CA011 Hard drinking water (250mL)					
保証値		単位はμg/kg			
Al	197	Cu	1970	Na	40
As	10.1	Cr	48	Ni	19.4
B	950	Fe	207	Pb	24.7
Ba	120	K	7.5	Sb	5.2
Ca	89.0	Mg	4.9	Se	10.7
Cd	4.94	Mn	47	Zn	586

ERM-CA15 Hard drinking water 250mg 単位はmg/kg	
Cl	247.0
F	1.3
Nitrate(as NO3)	45mg/L
Sulfate(as SO4)	247mg/L

ERM-CA016 Soft drinking water 250mg 単位はmg/kg	
Cl	250.0
F	1.5
Nitrate(as NO3)	48mg/L
Sulfate(as SO4)	254mg/L

Fresh Water (low contains) BCR479 100mL	
Nitrate As amount of substance content	214 μ mol/kg
As mass fraction	13.3 μ mol/kg

Fresh Water (low contains) BCR480 100mL	
Nitrate As amount of substance content	855 μ mol/kg
As mass fraction	54.9 μ mol/kg

Natural Water SRM1640a (250mL)					
保証値			単位はμ g/kg		
Al	52.6	Cr	40.22	Ni	25.12
Sb	5.0064	Co	20.08	Se	19.97
As	8.010	Cu	85.07	Ag	8.017
Ba	150.60	Fe	36.5	Sr	125.03
Be	3.002	Pb	12.005	Th	1.606
B	300.7	Mn	40.07	U	25.15
Cd	3.961	Mo	45.24	V	14.93
				Zn	55.20
参考値					
Ca	5.570 mg/kg	Li	0.4034 μ g/kg		
Mg	1.0502 mg/kg	Rb	1.188 mg/kg		
K	0.5753 mg/kg				
Si	5.169 mg/kg				
Na	3.112 mg/kg				

Natural Water – Mercury SRM1641d (10x10mL)	
Mercury	1.590 mg/kg

Trace Elements in Water SRM1643e (250mL) Mass Fraction単位はμ g/kg 在庫切れ			
Ag	Cd	Mn	Sr
Al	Cr	Mo	Te
As	Co	Na	Tl
B	Cu	Ni	V
Ba	Fe	Pb	Zn
Be	K	Ru	
Bi	Li	Sb	
Ca	Mg	Se	

地下水

Bromide in ground water based on IC measurements (low contents) BCR611 25mL	
Br	93 μ g/kg

Bromide in ground water based on IC measurements (high contents) BCR612 25mL	
Br	252 μ g/kg

LGC6016 Estuarine water (50mL) 単位は μ g/kg	
Cd	101
Cu	190
Mn	976
Ni	186
Pb	196

Indicative values for Ca, K, Mg, Na, Zn

LGC6175 Landfill leachate (50mL) 単位mg/kg	
B	8.9
Ca	148
Fe	1.05
K	385
Mg	221
Mn	0.33
Na	860
Ni	0.09
Zn	0.28

LGC6177 Landfill leachate (5x50mL) 単位mg/kg	
B	9.8
Ca	74.8
Cr	0.18
Fe	3.8
K	780
Mg	73.5
Mn	0.14
Na	1750
Ni	0.21
P	11.5

	Grand water (low contents) BCR609 (μ g/kg) 500mL	Grand water (high contents) BCR610 (μ g/kg) 500mL	Grand water (high carbonate contents) BCR616 75mL	Grand water (low carbonate contents) BCR617 75mL
Al	47.7	159		
As	1.20	10.8		
Cd	0.164	2.94		
Cu	2.48	45.7		
Pb	1.63	7.78		
Ca			38.5	14.6
Cl			49.8	26.4
K			0.58	9.93
Mg			23.9	7.32
Mn			0.0197	0.050
Na			61.5	14.6
NO ₃			50.4	25.8
PO ₄			3.36	
SO ₄			57.3	26.3

単位はmg/kg

汚水 分析

	Wastewater (effluent) BCR713 500mL		Wastewater (influent) BCR714 500mL		Wastewater (industrial effluent) BCR715 75mL	
As	9.7		18.3		29	
Cd	5.1		19.9		40	
Cr	21.9		123		1.00mg/L	
Cu	69		309		0.90mg/L	
Fe	0.40mg/L		1.03mg/L		3.00mg/L	
Mn	43.4		103		248	
Ni	30		108		1.20mg/L	
Pb	47		145		0.49mg/L	
Se	5.6		9.8		29	
Zn	0.22mg/L		1.00mg/L		4.0mg/L	

単位の無い値はμ g/L

河川水 分析

河川水(添加) NMIJ 7202-b (100mL)	
B	48.7
Al	15.0
Cr	4.81
Cr	4.81
Mn	5.03
Ni	1.07
Cu	10.1
Zn	10.3
As	1.18
Se	1.04
Rb	0.651
Sr	32.7
Mo	0.184
Cd	0.98
Sb	0.0103
Ba	5.69
Pb	1.002

単位の無い値ははμ g/kg

River Water		SLRS-4 (500mL)		単位の無い値はμ g/L	
Ca	6.2 mg/L	Al	54	Cr	0.33
Mg	1.6 mg/L	Sb	0.23	Co	0.033
K	0.68 mg/L	As	0.68	Cu	1.81
Na	2.4 mg/L	Ba	12.2	Fe	103
		Be	0.007	Pb	0.086
		Ca	0.012	Mn	3.37
				Zn	0.93

LGC6019 River water (250mL)		単位の無い値はμ g/L	
Al	73	Cu	15.4
Ca	109mg/L	Fe	287.00
Cd	0.11	K	4.78mg/L
Cr	0.78	Mg	4.62mg/L
		Na	24.7mg/L
		Pb	5.2
		Zn	59.7

Elevated Mercury in River Water		ORMS-2	50mL x 3
Mercury		30.6 ng/L	

LGC6020 River water		単位はmg/L
Cl	38.5	
Nitrate(as NO3)	39.4	
Phosphate(as PO4)	1.1	
Sulfate(as SO4)	53.2	

汽水域 分析

Estuarine Water		SLEW-3 (500mL)		単位の無い値はμ g/L	
As	1.36	Cu	1.55	Ni	1.23
Cd	0.048	Fe	0.568	V	2.57
Cr	0.183	Pb	0.0090	Zn	0.201
Co	0.042	Mn	1.61		

参考値: Mo, Ag, U

Estuarine Water		BCR 505	1L	単位はnmol/kg
Cd	0.80			
Cu	29.4			
Ni	24.1			
Zn	172			

上記の分析値の他にCo, Fe, Pb の参考値あり。

海水 分析

Coastal Sea Water (港湾海水)		BCR 579	1L
Hg	40.2		単位はnmolg/kg

Nearshore Seawater(沿岸海水)		CASS-4	(500mL)	単位の無い値はμ g/L	
As	1.11	Cu	0.592	Mo	8.78
Cd	0.026	Fe	0.713	Ni	0.314
Cr	0.144	Pb	0.0098	V	1.18
Co	0.026	Mn	2.78	Zn	0.381

参考値: U

海水(沖)		NASS-5	(500mL)	単位の無い値はμ g/L	
As	1.27	Cu	0.297	Mo	9.6
Cd	0.023	Fe	0.207	Ni	0.253
Cr	0.110	Pb	0.008	Zn	0.102
Co	0.011	Mn	0.919		

参考値: Se, U, V

Sea Water for Nutrients		MOOS-1	50mL x 2
Orthophosphate	1.56 mmol/L		
Silicate	26.0 mmol/L		
Nitrite	3.06 mmol/L		
Nitrite & Nitrate	30.6 ng/L		

粉塵中の有害有機物質分析 (PCB、塩素系有機農薬、多環芳香、PBDE)

Urban Dust - 有害有機物質 SRM1649b (2g)			
PCB (IUPAC No.)			
認 証 値 単位: Mass Fraction μ g/kg			
49	8.92	153	74.8
52	23.7	163	21.69
101	55.1	183	16.80
105	9.7	187	38.5
110	32.9	194	27.8
149	77.5	206	16.6
151	32.6		
保 証 値 単位: Mass Fraction μ g/kg			
8	10.5	156	7.2
18	15.4	157	1.59
28	17.4	158	6.8
31	14.3	170	35.4
44	14.2	174	30.0
45	1.9	175	1.27
56 60	8.8	176	4.74
66	20.2	177	16.2
70	17.9	178	6.6
74	6.5	180	72.4
82	2.5	185	4.03
87 81	13.5	189	1.6
92 84 89	7.5	191	1.34
95	48.1	195	8.8
99	10.7	199	30.8
107	4.4	200	2.6
118	23.8	201	3.8
128	9.5	203 196	32.2
130	2.55	205	1.46
137	10.9	207	2.2
138	59	208	4.2
146	9.84	209	5.60
塩素系有機農薬 認 証 値 単位: Mass Fraction μ g/kg			
trans-Chlordane(γ -Chlordane)	50.7	4,4'-DDE	49.5
trans-Nonachlor	33.0	4,4'-DDD	36.8
塩素系有機農薬 (トキサフェン含む) 保 証 値 単位: Mass Fraction μ g/kg			
alpha-HCH	13.4	Parlar 58	8.61
gamma-HCH	3.1	Parlar 39	2.38
pentachlorobenzene	61	2-exo,3-endo,5-exo,8,9,10,10-heptachlorobormane	2.07
hexachlorobenzene	2.91	2,2,5,5,8,9,10-heptachlorobomane	1.66
oxychlordane	3.64	2,2,3-exo,5-endo,6-exo,8,9,10,10-nonachlorobormane	3.04
cis-chlordane	45.5	2-exo,3,3,5-exo,6-endo,8,9,10,10-nonachlorobormane	1.08
cis-nonachlor	12.7	Parlar 56	2.79
mirex	1.30	Parlar 42	7.89
2,4'-DDE	4.6	2-endo,3-exo,5-endo,6-exo,8,9,10-heptachlorobormane	1.04
2,4'-DDD	13.3	2,2,5-endo,6-exo,8,9,10,10-octachlorobormane	5.46
2,4'-DDT	38.6	Parlar 40	8.75
4,4'-DDT	230	Parlar 25	1.18
Parlar 26	1.76	Parlar 31	1.45
Parlar 50	7.78	Parlar 44	3.87
Parlar 62	7.36	Parlar 41	6.06
Parlar 32	8.34	2-endo,3-exo,6-exo,8,8,9,10,10-octachlorobormane	1.9
2,2,3-exo,5,5,9,9,10,10-nonachlorobomane	1.31		

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多環芳香 Mass Fraction mg/kg			
認 証 値			
Phenanthrene	3.941	Benzo[e]pyrene	2.970
4H-Cyclopenta[def]phenanthrene	0.252	Benzo[a]pyrene	2.47
Fluoranthene	6.14	Perylene	0.606
Pyrene	4.784	Benzo[ghi]perylene	3.937
Benzo[ghi]fluoranthene	0.885	Indeno[1,2,3-cd]pyrene	2.96
Benzo[c]phenanthrene	0.449	Anthanthrene	0.509
Benzo[a]anthracene	2.092	Dibenz[a,c]anthracene	0.212
Chrysene	3.008	Dibenz[a,h]anthracene	0.290
Triphenylene	1.244	Picene	0.390
Benzo[b]fluoranthene	5.99	Dibenzo[b,k]fluoranthene	0.655
Benzo[j]fluoranthene	1.731	Dibenzo[a,e]pyrene	0.438
Benzo[k]fluoranthene	1.748		
保 証 値			
Naphthalene	1.12	Cyclopenta[cd]pyrene	0.235
Biphenyl	0.198	2-Methylchrysene	0.348
Acenaphthene	0.192	3-Methylchrysene	0.229
Acenaphthalene	0.184	6-Methylchrysene	0.153
Fluorene	0.222	Benzo[a]fluoranthene	0.372
Dibenzothiophene	0.183	Dibenzo[aj]anthracene	0.321
Anthracene	0.403	Pentaphene	0.201
1-Methylphenanthrene	0.346	Benzo[b]chrysene	0.332
2-Methylphenanthrene	0.79	Benzo[c]chrysene	0.083
3-Methylphenanthrene	0.508	Corenene	2.83
9-Methylphenanthrene	0.351	Dibenzo[b,e]fluoranthene	0.083
1,7-Dimethylphenanthrene	0.225	Naphtho[1,2-b]fluoranthene	0.612
1-Methylfluoranthene	0.132	Naphtho[2,3-b]fluoranthene	0.147
3-Methylfluoranthene	0.326	Dibenzo[a,k]fluorancene	0.057
8-Methylfluoranthene	0.230	Dibenzo[j,l]fluorancene	0.356
1-Methylpyrene	0.347	Dibenzo[a,l]pyrene	0.054
2-Methylpyrene	0.521	Naphtho[2,3-e]pyrene	0.175
4-Methylpyrene	0.226	Naphtho[2,1-e]pyrene	0.367
Retene	0.251	Dibenzo[e,l]pyrene	0.247
下記のNitro-Substituted PAH (保証値)の単位はμ g/kg			
1-Nitronaphthalene	7.2	2-Nitrofluoranthene	311
2-Nitronaphthalene	11.4	3-Nitrofluoranthene	4.6
3-Nitrobiphenyl	3.5	1-Nitropyrene	71.8
5-Nitroacenaphthene	3.1	2-Nitropyrene	10.8
4-Nitrophenanthrene	0.51	4-Nitropyrene	5.5
3-Nitrophenanthrene	22.1	8-Nitrofluoranthene	8.5
9-Nitrophenanthrene	1.8	7-Nitrobenzo[a]anthracene	24.2
9-Nitroanthracene	34.6	6-Nitrochrysene	3.8
Decabromodiphenyl Ether Mass Fraction μ g/kg			
保 証 値			
81.2			

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Dibenzo-p-Dioxin and Dibenzofuran Mass Fraction μ g/kg			
保証値			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	0.008	Total Tetrachlorodibenzo-p-dioxins	0.15
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	0.086	Total Pentachlorodibenzo-p-dioxins	0.82
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.226	Total Hexachlorodibenzo-p-dioxins	6.4
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.654	Total Heptachlorodibenzo-p-dioxins	30.3
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.522		
1,2,3,4,6,7,8-Hexachlorodibenzo-p-dioxin	17.1	Total Tetrachlorodibenzofuran	0.74
Otachlorodibenzo-p-dioxin	196	Total Pentachlorodibenzofuran	1.65
		Total Hexachlorodibenzofuran	4.3
2,3,7,8-Tetrachlorodibenzofuran	0.041	Total Heptachlorodibenzofuran	8.3
1,2,3,7,8-Pentachlorodibenzofuran	0.088		
2,3,4,7,8-Pentachlorodibenzofuran	0.280	Total Dibenzo-p-dioxins	234
1,2,3,4,7,8-Hexachlorodibenzofuran	0.987	Total Dibenzofuran	21.1
1,2,3,6,7,8-Hexachlorodibenzofuran	0.377		
2,3,4,6,7,8-Hexachlorodibenzofuran	0.507		
1,2,3,7,8,9-Hexachlorodibenzofuran	0.041		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	3.44		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.436		
Octachlorodibenzofuran	6.15		
追加情報 Mass Fraction mg/kg			
情報値			
9-Fluorenone	1.4	n-heptacosane	62
Antraquinone	1.8	n-octacosane	42
Benzanthrene	1.6	n-nonacosane	58
Benz[a]anthracene-7,12-dione	3.6	n-triacontane	25
n-eicosane	1.9	n-hentriacontane	41
n-docosane	5.2	n-dotriacontane	14
n-tricosane	16	α, α, α (20R)-Cholestane	2.1
n-tetracosane	27	17 α (H)-22,29,30-Trisnorhopane	2.8
n-pentacosane	65	17 α (H),21 β (H)-(22R)-Homohopane	4.9
n-hexacosane	66	17 α (H),21 β (H)-(22S)-Homohopane	5.4

Organic Contaminants in House Dust SRM2585 (10g)			
多環芳香	保証値 Mas Fraction (dry-mass basis) μ	多環芳香	保証値 Mas Fraction (dry-mass basis) μ
Naphthalene	266	Benzo[j]fluoranthene	1320
Dibenzothiophene	109	Benzo[k]fluoranthene	1330
Phenanthrene	1920	Benzo[a]fluoranthene	74.5
Anthracene	96.0	Benzo[e]pyrene	2160
4H-cyclopenta[def]phenanthrene	117	Benzo[a]pyrene	1140
3-Methylphenanthrene	293	Perylene	387
2-Methylphenanthrene	352	Benzo[ghi]perylene	2280
9-Methylphenanthrene	205	Indeo[1,2,3-cd]pyrene	2080
1-Methylphenanthrene	197	Dibenz[a,j]anthracene	267
Fluoranthene	4380	Dibenz[a,c]anthracene	183
Pyrene	3290	Dibenz[a,h]anthracene	301
Benzo[ghi]fluoranthene	317	Benzo[b]chrysene	182
Benzo[c]phenanthrene	288	Picene	413
Benzo[a]anthracene	1160	Coronene	603
Chrysene	2260	Dibenzo[b,k]fluoranthene	596
Triphenylene	589	Dibenzo[a,e]pyrene	477
Benzo[b]fluoranthene	2700		
多環芳香	参考値 Mas Fraction (dry-mass basis) μ g/kg	多環芳香	参考値 Mas Fraction (dry-mass basis) μ g/kg
1-Methylnaphthalene	150	Anthanthrene	91
2-Methylnaphthalene	227	Dibenzo[b,e]fluoranthene	59.6
Biphenyl	88	Naphtho[1,2-b]fluoranthene	312
Retene	588	Naphtho[1,2-k]& naphtho[2,3-j]fluoranthene	382
1,7-Dimethylphnanthrene	219	Naphtho[2,3-b]fluoranthene	93
1-Methylfluoranthene	94	Naphtho[2,4-k]fluoranthene	24.7
3-Methylfluoranthene	235	Dibenzo[a,k]fluoranthene	14.3
8-Methylfluoranthene	1322	Dibenzo[j,l]fluoranthene	260
4-Methylpyrene	235	Dibenzo[a,l]pyrene	42.3
2-Methylpyrene	345	Naphtho[2,3-e]pyrene	145
1-Methylpyrene	209	Naphtho[2,1-a]pyrene	379
3-Methylchrysene	146	Dibenzo[e,l]pyrene	208
2-Methylchrysene	181	Benzo[b]perylene	103
6-Methylchrysene	88	Dibenzo[a,i]pyrene	105
4-Methyl-&1-Methylchrysene	94.8	Dibenzo[a,h]pyrene	20.9
9-Methyl-&3-Methylbenzo[a]anthrene	92.3	Naphtho[2,3-k]fluoranthene & Naphtho[1,2-a]pyrene	44.3
6-Methyl-&1-Methylbenzo[a]anthrene	155		
PCB (IUPAC No.)	保証値 Mas Fraction (dry-mass basis) μ	PCB (IUPAC No.)	保証値 Mas Fraction (dry-mass basis) μ
18	12.8	110	28.1
28	13.4	118	26.3
31	14.0	138	27.6
44	18.1	146	4.89
52	21.8	149	24.4
56	4.42	151	6.92
70	13.1	153+132	40.2
74	5.22	158	4.50
87	16.6	163	7.2
92	5.48	170	8.8
95	22.7	174	8.83
99	11.6	180	18.4
101	29.8	183	5.27
105	13.2	187	11.3
107	4.14	206	3.81

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PCB (IUPAC No.)	参考値Mas Fraction (dry-mass basis) μ g/kg	PCB (IUPAC No.)	参考値Mas Fraction (dry-mass basis) μ g/kg
49	16.4	178	2.17
63	6.69	185	5.32
66	8.5	193	1.23
121	18.7	194	4.47
128	8.1	199	5.81
177	5.50	209	2.14
有機塩素系農薬	保証値Mas Fraction (dry-mass basis) μ g/kg	有機塩素系農薬	保証値Mas Fraction (dry-mass basis) μ g/kg
4,4'-DDE	261	2,4'-DDT	44.5
4,4'-DDD	27.3	4,4'-DDT	111
有機塩素系農薬	参考値Mas Fraction (dry-mass basis) μ g/kg	有機塩素系農薬	参考値Mas Fraction (dry-mass basis) μ g/kg
cis-Chlordane	174	Heptachlor Epoxide	11.3
trans-Chlordane	277	Dieldrin	88
cis-Nonachlor	28.0	γ -HCH	4.06
trans-Nonachlor	130	Mirex	6.89
Heptachlor	166	Pentachlorobenzene	20.9
PBDE Congener	保証値Mas Fraction (dry-mass basis) μ g/kg	PBDE Congener	保証値Mas Fraction (dry-mass basis) μ g/kg
17	11.5	153	119
28 + 33	46.9	154	83.5
47	487	155	3.94
49	53.5	183	43.0
85	43.8	203	36.7
99	892	206	271
100	145	209	2510
138	15.2		
PBDE Congener	参考値Mas Fraction (dry-mass basis) μ g/kg	PBDE Congener	参考値Mas Fraction (dry-mass basis) μ g/kg
66	29.5	190	5.1
75	4.5		
PBDE Congener	情報値Mas Fraction (dry-mass basis) μ g/kg	PBDE Congener	情報値Mas Fraction (dry-mass basis) μ g/kg
25	< 0.2	156	< 0.2
30	< 0.2	181	< 0.2
71	< 0.2	191	< 0.2
116	< 0.2	295	< 0.2
119	< 0.2		

クロム 分析

	Welding dust loaed on a filter BCR545 単位はg/kg
Cr(VI)	40.2
total leachable Cr	39.5

ダイオキシン 分析

ダイオキシン	Fly Ash BCR490 30g 単位はμg/kg
2,3,7,8-T ₄ CDD (D48)	0.169
1,2,3,7,8-P ₄ CDD (D54)	0.67
1,2,3,4,7,8-H ₆ CDD (D66)	0.95
1,2,3,6,7,8-H ₄ CDD (D67)	4.8
1,2,3,7,8,9-H ₆ CDD (D70)	2.84
2,3,7,8-T ₄ CF (F83)	0.90
1,2,3,8,9-P ₅ CDF (F94)	1.71
2,3,4,7,8-P ₅ CDF (F114)	1.85
1,2,3,4,7,8-H ₆ CDF (F118)	2.37
1,2,3,6,7,8-H ₆ CDF (F121)	2.64
1,2,3,7,8,9-H ₆ CDF (F124)	0.34
2,3,4,6,7,8-H ₆ CDF (F130)	2.47

ダイオキシン	Fly Ash BCR615(low level) 50g 単位はng/kg
2,3,7,8-T ₄ CDD (D48)	27
1,2,3,7,8-P ₄ CDD (D54)	92
1,2,3,4,7,8-H ₆ CDD (D66)	74
1,2,3,6,7,8-H ₄ CDD (D67)	103
1,2,3,7,8,9-H ₆ CDD (D70)	108
1,2,3,4,6,7,8,9-H ₇ CDD (D73)	0.87 × 10 ³
O ₈ CDD (D75)	1.75 × 10 ³
2,3,7,8-T ₄ CF (F83)	86
1,2,3,8,9-P ₅ CDF (F94)	176
2,3,4,7,8-P ₅ CDF (F114)	125
1,2,3,4,7,8-H ₆ CDF (F118)	203
1,2,3,6,7,8-H ₆ CDF (F121)	204
1,2,3,7,8,9-H ₆ CDF (F124)	13.3
2,3,4,6,7,8-H ₆ CDF (F130)	130
1,2,3,4,6,7,8-H ₇ CDF (F131)	0.75 × 10 ³
1,2,3,4,7,8,9-H ₇ CDF (F134)	61
O ₈ CDF (F135)	0.29 × 10 ³

ハロカーボン 分析

Halocarbons (in Methanol) for Water Analysis SRM1639 (set of 5)		
Certified of Compound	濃度 ng/μ L (at 23°C±3°C)	
Chloroform	6235	
Chlorodibromomethane	124.6	
Bromodichloromethane	389.9	
Bromoform	86.5	
Carbon tetrachloride	157	
Trichloroethylene	85.8	
Tetrachloroethylene	40.6	
Summary of Result	濃度Calculated ng/μ L	濃度Calculatedn g/μ L
Chloroform	6311	6235
Chlorodibromomethane	124.9	124.6
Bromodichloromethane	392	389.9
Bromoform	87.7	86.5
Carbon tetrachloride	160.1	157
Trichloroethylene	87.9	85.8
Tetrachloroethylene	40.95	40.6