

**PSC Analytical Services
Certificate of Analysis**

	R02100402	R02100402	R02100402
Client ID:	03A	03A	03A
Lab No.:	039088 02	039088 02	039088 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	0.13	pg	2.2	0.22
2,3,7,8-Cl4DBD	0.37	"	<0.37	<0.37
1,2,3,7,8-Cl5DBF	0.33	"	<0.33	<0.016
2,3,4,7,8-Cl5DBF	0.25	"	0.48	0.24
1,2,3,7,8-Cl5DBD	0.65	"	<0.65	<0.33
1,2,3,4,7,8-Cl6DBF	0.19	"	<0.19	<0.019
1,2,3,6,7,8-Cl6DBF	0.18	"	<0.18	<0.018
2,3,4,6,7,8-Cl6DBF	0.21	"	<0.21	<0.021
1,2,3,7,8,9-Cl6DBF	0.23	"	<0.23	<0.023
1,2,3,4,7,8-Cl6DBD	0.23	"	<0.23	<0.023
1,2,3,6,7,8-Cl6DBD	0.21	"	<0.21	<0.021
1,2,3,7,8,9-Cl6DBD	0.21	"	<0.21	<0.021
1,2,3,4,6,7,8-Cl7DBF	0.68	"	<0.68	<0.0068
1,2,3,4,7,8,9-Cl7DBF	1.5	"	<1.5	<0.015
1,2,3,4,6,7,8-Cl7DBD	0.21	"	0.44	0.0044
1,2,3,4,6,7,8,9-Cl8DBF	0.38	"	<0.38	<0.00038
1,2,3,4,6,7,8,9-Cl8DBD	0.27	"	3.0	0.0030
TEF		pg		0.46
EPA Requested TEQ			<	0.88
MAX TEF		"	<	1.3
Units Ng/m²			<	0.09
ΣT4CDF	0.13	pg	5.5	6
ΣP5CDF	0.26	"	1.6	3
ΣH6CDF	0.19	"	<0.19	0
ΣH7CDF	1.4	"	<1.4	0
OCDF	0.38	"	<0.38	0
ΣT4CDD	0.37	"	3.9	2
ΣP5CDD	0.65	"	1.9	2
ΣH6CDD	0.21	"	<0.21	0
ΣH7CDD	0.21	"	0.44	1
OCDD	0.27	"	3.0	1
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			85	
2,3,7,8-T4CDD-13C12			84	
1,2,3,7,8-P5CDF-13C12			87	
1,2,3,7,8-P5CDD-13C12			92	
1,2,3,6,7,8-H6CDF-13C12			87	
1,2,3,6,7,8-H6CDD-13C12			88	
1,2,3,4,6,7,8-H7CDF-13C12			99	
1,2,3,4,6,7,8-H7CDD-13C12			98	
OCDD-13C12			78	

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	R02100402	R02100402	R02100402
Client ID:	04A	04A	04A
Lab No.:	039089 02	039089 02	039089 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	0.085	pg	3.6	0.36
2,3,7,8-Cl4DBD	0.26	"	0.33	0.33
1,2,3,7,8-Cl5DBF	0.49	"	0.64	0.032
2,3,4,7,8-Cl5DBF	0.47	"	<0.47	<0.24
1,2,3,7,8-Cl5DBD	0.38	"	<0.38	<0.19
1,2,3,4,7,8-Cl6DBF	0.42	"	<0.42	<0.042
1,2,3,6,7,8-Cl6DBF	0.39	"	<0.39	<0.039
2,3,4,6,7,8-Cl6DBF	0.46	"	<0.46	<0.046
1,2,3,7,8,9-Cl6DBF	0.49	"	<0.49	<0.049
1,2,3,4,7,8-Cl6DBD	0.30	"	<0.30	<0.030
1,2,3,6,7,8-Cl6DBD	0.44	"	0.66	0.066
1,2,3,7,8,9-Cl6DBD	0.42	"	0.71	0.071
1,2,3,4,6,7,8-Cl7DBF	7.8	"	<7.8	<0.078
1,2,3,4,7,8,9-Cl7DBF	6.3	"	<6.3	<0.063
1,2,3,4,6,7,8-Cl7DBD	1.1	"	6.1	0.061
1,2,3,4,6,7,8,9-Cl8DBF	1.1	"	<1.1	<0.0011
1,2,3,4,6,7,8,9-Cl8DBD	1.4	"	37	0.037
TEF		pg		0.96
EPA Requested TEQ			<	1.33
MAX TEF		"	<	1.7
Units Ng/m ²			<	0.13
ΣT4CDF	0.085	pg	6.9	5
ΣP5CDF	0.49	"	2.3	3
ΣH6CDF	0.42	"	<0.42	0
ΣH7CDF	5.8	"	<5.8	0
OCDF	1.1	"	<1.1	0
ΣT4CDD	0.26	"	11	7
ΣP5CDD	0.29	"	0.81	1
ΣH6CDD	0.44	"	2.9	3
ΣH7CDD	1.1	"	14	2
OCDD	1.4	"	37	1
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			89	
2,3,7,8-T4CDD-13C12			85	
1,2,3,7,8-P5CDF-13C12			72	
1,2,3,7,8-P5CDD-13C12			67	
1,2,3,6,7,8-H6CDF-13C12			76	
1,2,3,6,7,8-H6CDD-13C12			82	
1,2,3,4,6,7,8-H7CDF-13C12			59	
1,2,3,4,6,7,8-H7CDD-13C12			79	
OCDD-13C12			58	

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Client ID:	05A	05A	05A
Lab No.:	039090 02	039090 02	039090 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	3.1	pg	<3.1	<0.31
2,3,7,8-Cl4DBD	0.47	"	<0.47	<0.47
1,2,3,7,8-Cl5DBF	0.49	"	<0.49	<0.025
2,3,4,7,8-Cl5DBF	0.13	"	0.53	0.27
1,2,3,7,8-Cl5DBD	0.37	"	<0.37	<0.18
1,2,3,4,7,8-Cl6DBF	0.64	"	<0.64	<0.064
1,2,3,6,7,8-Cl6DBF	0.42	"	<0.42	<0.042
2,3,4,6,7,8-Cl6DBF	0.49	"	<0.49	<0.049
1,2,3,7,8,9-Cl6DBF	0.53	"	<0.53	<0.053
1,2,3,4,7,8-Cl6DBD	0.27	"	<0.27	<0.027
1,2,3,6,7,8-Cl6DBD	0.25	"	<0.25	<0.025
1,2,3,7,8,9-Cl6DBD	0.25	"	<0.25	<0.025
1,2,3,4,6,7,8-Cl7DBF	3.7	"	<3.7	<0.037
1,2,3,4,7,8,9-Cl7DBF	4.3	"	<4.3	<0.043
1,2,3,4,6,7,8-Cl7DBD	3.8	"	<3.8	<0.038
1,2,3,4,6,7,8,9-Cl8DBF	1.9	"	<1.9	<0.0019
1,2,3,4,6,7,8,9-Cl8DBD	1.9	"	34	0.034
TEF		pg	0.30	
EPA Requested TEQ			< 1.00	
MAX TEF		"	< 1.7	
Units Ng/m²			< 0.10	
ΣT4CDF	0.14	pg	5.1	5
ΣP5CDF	0.13	"	0.53	1
ΣH6CDF	0.45	"	<0.45	0
ΣH7CDF	4.0	"	<4.0	0
OCDF	1.9	"	<1.9	0
ΣT4CDD	0.47	"	10	4
ΣP5CDD	0.37	"	2.6	1
ΣH6CDD	0.25	"	1.3	1
ΣH7CDD	0.64	"	4.7	1
OCDD	1.9	"	34	1
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			91	
2,3,7,8-T4CDD-13C12			88	
1,2,3,7,8-P5CDF-13C12			75	
1,2,3,7,8-P5CDD-13C12			70	
1,2,3,6,7,8-H6CDF-13C12			96	
1,2,3,6,7,8-H6CDD-13C12			89	
1,2,3,4,6,7,8-H7CDF-13C12			85	
1,2,3,4,6,7,8-H7CDD-13C12			77	
OCDD-13C12			50	

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	R02100402	R02100402	R02100402
Client ID:	06A	06A	06A
Lab No.:	039091 02	039091 02	039091 02
Date Sampled:	02/10/09	02/10/09	02/10/09
Matrix:			

Component	RDL	Units	TEF	# of Isomers
Dioxins and furans				
2,3,7,8-Cl4DBF	0.22	pg	1.2	0.12
2,3,7,8-Cl4DBD	0.37	"	<0.37	<0.37
1,2,3,7,8-Cl5DBF	0.29	"	<0.29	<0.015
2,3,4,7,8-Cl5DBF	0.27	"	<0.27	<0.14
1,2,3,7,8-Cl5DBD	0.37	"	<0.37	<0.19
1,2,3,4,7,8-Cl6DBF	0.36	"	<0.36	<0.036
1,2,3,6,7,8-Cl6DBF	0.34	"	<0.34	<0.034
2,3,4,6,7,8-Cl6DBF	0.40	"	<0.40	<0.040
1,2,3,7,8,9-Cl6DBF	0.43	"	<0.43	<0.043
1,2,3,4,7,8-Cl6DBD	0.25	"	<0.25	<0.025
1,2,3,6,7,8-Cl6DBD	0.23	"	<0.23	<0.023
1,2,3,7,8,9-Cl6DBD	0.22	"	<0.22	<0.022
1,2,3,4,6,7,8-Cl7DBF	28	"	<28	<0.28
1,2,3,4,7,8,9-Cl7DBF	32	"	<32	<0.32
1,2,3,4,6,7,8-Cl7DBD	0.48	"	<0.48	<0.0048
1,2,3,4,6,7,8,9-Cl8DBF	0.44	"	<0.44	<0.00044
1,2,3,4,6,7,8,9-Cl8DBD	0.46	"	2.8	0.0028
TEF		pg	0.12	
EPA Requested TEQ			< 0.91	
MAX TEF		"	< 1.7	
Units Ng/m²			< 0.09	
ΣT4CDF	0.22	pg	2.1	3
ΣP5CDF	0.29	"	<0.29	0
ΣH6CDF	0.36	"	<0.36	0
ΣH7CDF	30	"	<30	0
OCDF	0.44	"	<0.44	0
ΣT4CDD	0.37	"	<0.37	0
ΣP5CDD	0.37	"	0.49	1
ΣH6CDD	0.23	"	<0.23	0
ΣH7CDD	0.34	"	<0.34	0
OCDD	0.46	"	2.8	1
Surrogate Recoveries		%		
2,3,7,8-T4CDF-13C12			98	
2,3,7,8-T4CDD-13C12			94	
1,2,3,7,8-P5CDF-13C12			92	
1,2,3,7,8-P5CDD-13C12			91	
1,2,3,6,7,8-H6CDF-13C12			77	
1,2,3,6,7,8-H6CDD-13C12			87	
1,2,3,4,6,7,8-H7CDF-13C12			68	
1,2,3,4,6,7,8-H7CDD-13C12			98	
OCDD-13C12			76	

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