

開発成果報告書

ダイオキシン類分析用 模擬排水認証標準物質 (第3ロット)

JSAC 0321-3

2016 年 12 月 1 日

公益社団法人 日本分析化学会

1. はじめに

ダイオキシン類分析用模擬排水標準物質(JSAC 0321-2)の在庫が僅少となったため、第3ロットとなる JSAC 0321-3 の開発・作製を行った。今回は認証のための共同実験を行わず、技能試験のデータをもとに認証値を決定した。

その理由としては、技能試験に参加する全ての試験所が MLAP(特定計量証明事業者認定制度)の認定事業者であり、能力のある試験所とみなされるので、認証共同実験試験所としてふさわしいと考えた。

このため(公社)日本分析化学会で実施した技能試験の結果をもとにして、同学会の標準物質委員会が検討を行って成分濃度の認証値を決定した。本開発報告書はその経緯をまとめたものである。

2. 技能試験の実施と標準物質用試料作製・認証の経緯

2. 1 概要

ISO/IEC 17043 に基づく技能試験 第18回ダイオキシン類分析(模擬排水)が、2016年6月～9月にわたり、(公社)日本分析化学会の主催で行われた。標準物質用の試料の作製と均質性試験も同時に行われた。これらの結果は上記技能試験の「最終報告書」^(文献1)(2016年11月25日)にまとめられているので参照いただきたい。

試料量3L入り300瓶が作製され約半数が技能試験用に使用され、残り150瓶(75セット)が標準物質用に頒布される予定である。

2. 2 認証値決定のための統計計算の経緯

認証値決定のための共同実験は行わず、第18回ダイオキシン類分析(模擬排水)技能試験のデータをベースにして認証を行った。従って、試験所の個々の値は文献1を参照いただきたい。

全ての技能試験参加試験所が MLAP(特定計量証明事業者認定制度)の認定事業者であるが、認証値を決めるためには認証のために行う共同実験と同じように、技能試験結果から外れ値を見分け、それを除外したうえで平均値や標準偏差を求めることが必要である。当技能試験結果の統計計算において、まずロバスト法 z スコアの絶対値が3以上となったもの(＃マーク)を除外した。また、多くの z スコアの絶対値が3以上となり、分析法に問題があると委員会で判定された試験所の値は、 z スコアの絶対値が3未満でも、同様に除外した。

また、異性体 2,3,4,6,7,8-HxCDF については、技能試験の後で参加試験所にアンケートを行った結果、単独分離可能なカラムを使用した試験所以外にも、多くの試験所が、異なったカラムによって妨害異性体の値を定量してそれを差引き、単独の値として報告されていることが分かった。そのためこの異性体については、アンケート結果に基づき、カラムの種類と定量方法を再整理して表-1 及び表-2 に示し、単独の値を報告した試験所の値をもとに、認証値を決定した。

これらの結果をもとに、採用した報告値の一覧を表-3 に、統計計算結果を表-4 に示す。

2. 3 認証値の決定

上記の検討により表-4のAverageとU95%を用い、有効数字を考慮したものを標準物質の認証値と不確かさとした。

不確かさを伴った認証値 : Average±U95%

2. 4 認証値表の利用の仕方

この認証標準物質には認証値の不確かさと所間(室間)標準偏差とが表示されている。所間標準偏差は技能試験に参加した試験所(外れ値を除いた後)の測定値の平均値(認証値)を基準として求めた標準偏差である。

認証値±の後に記された不確かさは、平均値の不確かさであり、試験所においてこの標準物質を分析した場合にこの不確かさの範囲に入ることを要求するものではない。

一般に、試験所において標準物質を分析すると、認証値との差が所間標準偏差の2倍以内にあることが望ましい。これは、例えば技能試験でzスコアの絶対値が2以下に入ることと同等である。

$$z \text{ スコア} = (\text{試験所の値} - \text{認証値}) / \text{所間標準偏差}$$

3. 認証書

以上の結果より JSAC 0321-3 の認証書を作成した。

以上

表- 1

第18回ダイオキシン類分析 技能試験 結果 (模擬排水)

2,3,4,6,7,8-HxCDF 定量値 単位 : pg/L

分析所番号	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PCDF Isomer(異性体)																
2,3,4,6,7,8-HxCDFの分析条件	1, 2	1	1, 2	1	1, 2	1, 2	1, 2	1, 2	1, 2	1	1, 2	1	1	1	1	1, 2
分析条件1カラム	BPX-DXN	SP-2331	BPX-DXN	SP-2331	BPX-DXN	BPX-DXN	BPX-DXN	BPX-DXN	BPX-DXN	SP-2331	BPX-DXN	SP2331	SP-2331	RTX-2330	SP-2331	BPX-DXN
分析条件2カラム	Rh-12ms	BPX-50	RH-12ms	DB-17	Rh-12ms	RH-12ms	RH-12ms	RH-12ms	RH-12ms	DB-17ms	RH-12ms	HP50	DB-17	HT-8PCB	DB-17	RH-12ms
OA : SP2331等にて単独分離 OB : 分析条件1,2で差異をとって単独の値 空白 : その他	OB	OA	OB	OA	OB	OB	OB	OB	OB	OA	OB	OA	OA	OA	OA	OB
2,3,4,6,7,8-HxCDF	56.75	61.50	61.55	60.40	60.10	55.80	70.30	62.90	52.95	74.20	63.45	61.95	62.75	58.05	70.50	51.15
z score	-1.349	-0.014	0.000	-0.323	-0.408	-1.616	2.459	0.379	-2.417	3.555	0.534	0.112	0.337	-0.984	2.515	-2.923
										#						
2,3,4,6,7,8-HxCDF OA		61.50		60.40						74.20		61.95	62.75	58.05	70.50	
z score		-0.009		-0.215						2.362		0.075	0.224	-0.653	1.671	
2,3,4,6,7,8-HxCDF OB	56.75		61.55		60.10	55.80	70.30	62.90	52.95		63.45					51.15
z score	-1.069		0.097		-0.255	-1.300	2.224	0.425	-1.993		0.559					-2.431
2,3,4,6,7,8-HxCDF O(A+B)	56.75	61.50	61.55	60.40	60.10	55.80	70.30	62.90	52.95	74.20	63.45	61.95	62.75	58.05	70.50	51.15
z score	-1.378	0.015	0.029	-0.308	-0.396	-1.657	2.595	0.425	-2.493	3.739	0.587	0.147	0.381	-0.997	2.654	-3.021
										#						#
2,3,4,6,7,8-HxCDF その他																
z score																
z > 3削除																
2,3,4,6,7,8-HxCDF	56.75	61.5	61.55	60.4	60.1	55.8	70.3	62.9	52.95		63.45	61.95	62.75	58.05	70.5	51.15
z score	-1.349	-0.014	0.000	-0.323	-0.408	-1.616	2.459	0.379	-2.417	3.555	0.534	0.112	0.337	-0.984	2.515	-2.923
										#						
2,3,4,6,7,8-HxCDF OA		61.5		60.4						74.2		61.95	62.75	58.05	70.5	
z score		-0.009		-0.215						2.362		0.075	0.224	-0.653	1.671	
2,3,4,6,7,8-HxCDF OB	56.75		61.55		60.1	55.8	70.3	62.9	52.95		63.45					51.15
z score	-1.069		0.097		-0.255	-1.300	2.224	0.425	-1.993		0.559					-2.431
2,3,4,6,7,8-HxCDF O(A+B)	56.75	61.5	61.55	60.4	60.1	55.8	70.3	62.9	52.95		63.45	61.95	62.75	58.05	70.5	
z score	-1.378	0.015	0.029	-0.308	-0.396	-1.657	2.595	0.425	-2.493	3.739	0.587	0.147	0.381	-0.997	2.654	-3.021
										#						#
2,3,4,6,7,8-HxCDF その他																
z score																

表- 1

第18回ダイオキシン類分析 技能試験 結果 (模擬排水)

2,3,4,6,7,8-HxCDF 定量値 単位 : pg/L

分析所番号	17	18	19	20	21	23	24	25	26	27	28	29	30	31	32	33
PCDF Isomer(異性体)																
2,3,4,6,7,8-HxCDFの分析条件	1	1, 2	1	1	1	1, 2	1	1, 2	1, 2	1, 2	2	2	1, 2	1, 2	1	1, 2
分析条件1カラム	SP-2331	BPX-DXN	CP-Sil88 for DIOXINS	BPX-DXN	BPX-DXN	BPX-DXN	SP-2331	BPX-DXN	BPX-DXN	BPX-DXN	BPX-DXN	BPX-DXN	BPX-DXN	BPX-DXN	SP-2331	BPX-DXN
分析条件2カラム	DB-17	RH-12ms	HT-8	RH-12ms	RH-12ms	RH-12ms	RH-12ms	RH12ms	RH-12ms	RH-12ms	RH-12ms	DB-17	RH-12ms	RH-12ms	DB-17	RH-12ms
OA : SP2331等にて単独分離 OB : 分析条件1,2で差異をとって単独の値 空白 : その他	OA	OB	OA	重なり	重なり	OB	OA	OB	OB	OB		OA	OB	OB	OA	OB
2,3,4,6,7,8-HxCDF	60.30	62.90	58.90	62.55	63.85	62.60	57.50	60.05	55.75	59.35	87.00	59.35	62.55	58.70	69.65	61.85
z score	-0.351	0.379	-0.745	0.281	0.646	0.295	-1.138	-0.422	-1.630	-0.618	7.152	-0.618	0.281	-0.801	2.276	0.084
											#					
2,3,4,6,7,8-HxCDF OA	60.30		58.90				57.50					59.35			69.65	
z score	-0.233		-0.495				-0.756					-0.411			1.512	
2,3,4,6,7,8-HxCDF OB		62.90				62.60		60.05	55.75	59.35			62.55	58.70		61.85
z score		0.425				0.352		-0.267	-1.313	-0.438			0.340	-0.595		0.170
2,3,4,6,7,8-HxCDF O(A+B)	60.30	62.90	58.90			62.60	57.50	60.05	55.75	59.35		59.35	62.55	58.70	69.65	61.85
z score	-0.337	0.425	-0.748			0.337	-1.158	-0.411	-1.672	-0.616		-0.616	0.323	-0.806	2.405	0.117
2,3,4,6,7,8-HxCDF その他				62.55	63.85						87.00					
z score				-0.188	0.000						3.340					
											#					
z > 3削除																
2,3,4,6,7,8-HxCDF	60.3	62.9	58.9	62.55	63.85	62.6	57.5	60.05	55.75	59.35		59.35	62.55	58.7	69.65	61.85
z score	-0.351	0.379	-0.745	0.281	0.646	0.295	-1.138	-0.422	-1.630	-0.618	7.152	-0.618	0.281	-0.801	2.276	0.084
											#					
2,3,4,6,7,8-HxCDF OA	60.3		58.9				57.5					59.35			69.65	
z score	-0.233		-0.495				-0.756					-0.411			1.512	
2,3,4,6,7,8-HxCDF OB		62.9				62.6		60.05	55.75	59.35			62.55	58.7		61.85
z score		0.425				0.352		-0.267	-1.313	-0.438			0.340	-0.595		0.170
2,3,4,6,7,8-HxCDF O(A+B)	60.3	62.9	58.9			62.6	57.5	60.05	55.75	59.35		59.35	62.55	58.7	69.65	61.85
z score	-0.337	0.425	-0.748			0.337	-1.158	-0.411	-1.672	-0.616		-0.616	0.323	-0.806	2.405	0.117
2,3,4,6,7,8-HxCDF その他				62.55	63.85											
z score				-0.188	0						3.340					
											#					

表- 1

第18回ダイオキシン類分析 技能試験 結果 (模擬排水)

2,3,4,6,7,8-HxCDF 定量値 単位 : pg/L

分析所番号	34	35	36R	37	38	40	41	42	43	44	45	46	47	48	49	50
PCDF Isomer(異性体)																
2,3,4,6,7,8-HxCDFの分析条件	1, 2	1, 2	1, 2	1, 2	1		1	1, 2	2	1, 2	2	1, 2	1, 2	1, 2	1, 2	1, 2
分析条件1カラム	BPX-DXN	BPX-DXN	BPX-DXN	BPX-DXN	SP-2331	SP-2331	BPX-DXN	RH-12ms	sp-2331	BPX-DXN	DB-17HT	BPX-DXN	BPX-DXN	BPX-DXN	BPX-DXN	BPX-DXN
分析条件2カラム	RH-12ms	RH-12ms	RH-12ms	RH-12ms	DB-17	DB-17	RH-12ms	BPX-DXN	sp-2331	RH-12ms	SP-2331	RH-12ms	RH-12ms	RH-12ms	RH-12ms	RH-12ms
OA : SP2331等にて単独分離 OB : 分析条件1,2で差異をとって単独の値 空白 : その他	OB	OB	OB	OB	OA	OA	重なり(前処理後時間経過)	OB	OA	OB	OA	OB	OB	OB	OB	OB
2,3,4,6,7,8-HxCDF	51.25	61.15	66.45	62.10	62.50	65.85	50.95	55.65	58.75	49.55	61.55	70.95	61.40	62.60	60.70	63.30
z score	-2.895	-0.112	1.377	0.155	0.267	1.208	-2.979	-1.658	-0.787	-3.372	0.000	2.642	-0.042	0.295	-0.239	0.492
										#						
2,3,4,6,7,8-HxCDF OA					62.50	65.85			58.75		61.55					
z score					0.177	0.803			-0.523		0.000					
2,3,4,6,7,8-HxCDF OB	51.25	61.15	66.45	62.10				55.65		49.55		70.95	61.40	62.60	60.70	63.30
z score	-2.406	0.000	1.288	0.231				-1.337		-2.819		2.382	0.061	0.352	-0.109	0.523
2,3,4,6,7,8-HxCDF O(A+B)	51.25	61.15	66.45	62.10	62.50	65.85		55.65	58.75	49.55	61.55	70.95	61.40	62.60	60.70	63.30
z score	-2.991	-0.088	1.466	0.191	0.308	1.290		-1.701	-0.792	-3.490	0.029	2.786	-0.015	0.337	-0.220	0.543
										#						
2,3,4,6,7,8-HxCDF その他							50.95									
z score							-1.861									
z > 3削除																
2,3,4,6,7,8-HxCDF	51.25	61.15	66.45	62.1	62.5	65.85	50.95	55.65	58.75		61.55	70.95	61.4	62.6	60.7	63.3
z score	-2.895	-0.112	1.377	0.155	0.267	1.208	-2.979	-1.658	-0.787	-3.372	0.000	2.642	-0.042	0.295	-0.239	0.492
										#						
2,3,4,6,7,8-HxCDF OA					62.5	65.85			58.75		61.55					
z score					0.177	0.803			-0.523		0.000					
2,3,4,6,7,8-HxCDF OB	51.25	61.15	66.45	62.1				55.65		49.55		70.95	61.4	62.6	60.7	63.3
z score	-2.406	0.000	1.288	0.231				-1.337		-2.819		2.382	0.061	0.352	-0.109	0.523
2,3,4,6,7,8-HxCDF O(A+B)	51.25	61.15	66.45	62.1	62.5	65.85		55.65	58.75		61.55	70.95	61.4	62.6	60.7	63.3
z score	-2.991	-0.088	1.466	0.191	0.308	1.290		-1.701	-0.792	-3.490	0.029	2.786	-0.015	0.337	-0.220	0.543
										#						
2,3,4,6,7,8-HxCDF その他							50.95									
z score							-1.861									

表- 1

第18回ダイオキシン類分析 技能試験 結果 (模擬排水)

2,3,4,6,7,8-HxCDF 定量値 単位 : pg/L

分析所番号	51	52	53	54R	55	56	58	59	60	61	62	63	64	65	66	67
PCDF Isomer(異性体)																
2,3,4,6,7,8-HxCDFの分析条件	1, 2	1	1, 2	1	1, 2	1, 2	1, 2	1	1, 2	2	1, 2	1, 2	1, 2	1	1, 2	1, 2
分析条件1カラム	BPX-DXN	SP2331	BPX-DXN	BPX-DXN	BPX-DXN	BPX-DXN	BPX-DXN	CP-Sil 88	BPX-DXN	BPX-DXN-I	BPX-DXN	BPX-DXN	BPX-DXN	BPX-DXN	BPX-DXN	BPX-DXN
分析条件2カラム	RH-12ms	DB-5MS	RH-12ms	RH-12ms	RH-12ms	RH-12ms	RH-12ms	HT8-PCB	RH-12ms	BPX-DXNII	RH-12ms	RH-12ms	RH-12ms	RH-12ms	RH-12ms	RH-12ms
OA : SP2331等にて単独分離 OB : 分析条件1,2で差異をとって単独の値 空白 : その他	OB	OA	OB	重なり	OB	OB高めの理由は検証していない。	OB	OA	OB	OA高めの理由は検証中	OB	OB(BPX-RH.逆にすると10%位低い)	OB	BPXで二山	OB	OB
2,3,4,6,7,8-HxCDF	63.55	66.85	59.65	71.90	70.00	75.50	59.50	51.70	64.60	73.05	55.75	70.05	60.85	56.65	62.50	60.70
z score	0.562	1.490	-0.534	2.909	2.375	3.920	-0.576	-2.768	0.857	3.232	-1.630	2.389	-0.197	-1.377	0.267	-0.239
2,3,4,6,7,8-HxCDF OA		66.85						51.70		73.05						
z score		0.990						-1.839		2.147						
2,3,4,6,7,8-HxCDF OB	63.55		59.65		70.00	75.50	59.50		64.60		55.75	70.05	60.85	56.65	62.50	60.70
z score	0.583		-0.365		2.151	3.488	-0.401		0.839		-1.313	2.163	-0.073	-1.094	0.328	-0.109
2,3,4,6,7,8-HxCDF O(A+B)	63.55	66.85	59.65		70.00	75.50	59.50	51.70	64.60	73.05	55.75	70.05	60.85	56.65	62.50	60.70
z score	0.616	1.584	-0.528		2.507	4.120	-0.572	-2.859	0.924	3.402	-1.672	2.522	-0.176	-1.408	0.308	-0.220
2,3,4,6,7,8-HxCDF その他				71.90												
z score				1.161												
z > 3削除																
2,3,4,6,7,8-HxCDF	63.55	66.85	59.65	71.9	70		59.5	51.7	64.6		55.75	70.05	60.85	56.65	62.5	60.7
z score	0.562	1.490	-0.534	2.909	2.375	3.920	-0.576	-2.768	0.857	3.232	-1.630	2.389	-0.197	-1.377	0.267	-0.239
2,3,4,6,7,8-HxCDF OA		66.85				#		51.7		73.05						
z score		0.990						-1.839		2.147						
2,3,4,6,7,8-HxCDF OB	63.55		59.65		70	75.5	59.5		64.6		55.75	70.05	60.85	56.65	62.5	60.7
z score	0.583		-0.365		2.151	3.488	-0.401		0.839		-1.313	2.163	-0.073	-1.094	0.328	-0.109
2,3,4,6,7,8-HxCDF O(A+B)	63.55	66.85	59.65		70		59.5	51.7	64.6		55.75	70.05	60.85	56.65	62.5	60.7
z score	0.616	1.584	-0.528		2.507	4.120	-0.572	-2.859	0.924	3.402	-1.672	2.522	-0.176	-1.408	0.308	-0.220
2,3,4,6,7,8-HxCDF その他				71.9		#				#						
z score				1.161												

表- 1

分析所番号	68
PCDF Isomer(異性体)	
2,3,4,6,7,8-HxCDFの分析条件	1, 2
分析条件1カラム	BPX-DXN
分析条件2カラム	RH-12ms
OA : SP2331等にて単独分離 OB : 分析条件1,2で差異をとって単独の値 空白 : その他	OB
2,3,4,6,7,8-HxCDF	57.35
z score	-1.180
2,3,4,6,7,8-HxCDF OA	
z score	
2,3,4,6,7,8-HxCDF OB	57.35
z score	-0.924
2,3,4,6,7,8-HxCDF O(A+B)	57.35
z score	-1.202
2,3,4,6,7,8-HxCDF その他	
z score	
z > 3削除	
2,3,4,6,7,8-HxCDF	57.35
z score	-1.180
2,3,4,6,7,8-HxCDF OA	
z score	
2,3,4,6,7,8-HxCDF OB	57.35
z score	-0.924
2,3,4,6,7,8-HxCDF O(A+B)	57.35
z score	-1.202
2,3,4,6,7,8-HxCDF その他	
z score	

表-2

第18回ダイオキシン類分析 技能試験 結果（模擬排水）

統計計算結果

	TEF	TEQ寄与率%	N	z >3	average	median	U95%	SD	NIQR	U95%*CV%	CV%clas	CV%rob
2,3,4,6,7,8-HxCDF	0.1	13.8	65	5 8%	62.0	61.6	1.6	6.5	3.6	3	10	6
2,3,4,6,7,8-HxCDF OA	0.1	13.8	19	0 0%	62.9	61.6	2.8	5.8	5.4	4	9	9
2,3,4,6,7,8-HxCDF OB	0.1	13.7	41	1 2%	61.0	61.2	1.7	5.5	4.1	3	9	7
2,3,4,6,7,8-HxCDF O(A+B)	0.1	13.8	60	5 8%	61.6	61.5	1.4	5.6	3.4	2	9	6
2,3,4,6,7,8-HxCDF その他	0.1	14.4	5	1 20%	67.3	63.9	16.6	13.3	6.9	25	20	11
z > 3削除												
2,3,4,6,7,8-HxCDF	0.1	13.8	60	5 8%	61.2	61.5	1.3	4.9	3.2	2	8	5
2,3,4,6,7,8-HxCDF OA	0.1	13.8	19	0 0%	62.9	61.6	2.5	5.8	5.4	4	9	9
2,3,4,6,7,8-HxCDF OB	0.1	13.7	41	1 2%	61.0	61.2	1.7	5.5	4.1	3	9	7
2,3,4,6,7,8-HxCDF O(A+B)	0.1	13.8	55	5 9%	61.3	61.4	1.2	4.5	3.0	2	7	5
2,3,4,6,7,8-HxCDF その他	0.1	14.2	4	1 25%	62.3	63.2	13.7	8.6	4.6	22	14	7

表-3

第18回ダイオキシン類分析 技能試験 結果 (模擬排水)

定量値単位 : pg/L

分析所番号	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PCDD Isomer(異性体)																
2,3,7,8-TeCDD	1.080	1.070	1.030	1.045	1.075	0.839	1.010	0.848	0.805		1.180	1.180	1.235	0.940	1.300	0.803
z score	0.090	-0.004	-0.359	-0.224	0.045	-2.075	-0.538	-1.990	-2.380	1.793	0.986	0.986	1.479	-1.165	2.062	-2.398
1,2,3,7,8-PeCDD	5.095	5.895	5.160	6.190	5.745	5.155	5.820	6.080	5.120		6.095	6.000	6.785	5.170	6.025	4.755
z score	-1.604	0.096	-1.466	0.722	-0.223	-1.476	-0.064	0.489	-1.551	2.687	0.520	0.319	1.986	-1.445	0.372	-2.326
1,2,3,4,7,8-HxCDD	5.580	4.530	4.875	6.150	5.275	4.680	6.410	5.965	4.985		5.710	5.410	5.995	5.315	5.745	4.415
z score	0.019	-1.990	-1.330	1.110	-0.564	-1.703	1.607	0.756	-1.119	2.545	0.268	-0.306	0.813	-0.488	0.335	-2.210
1,2,3,6,7,8-HxCDD	11.300	9.870	11.300	11.600	12.250	10.700	13.700	12.600	11.100		12.100	11.800	12.050	11.700	12.500	10.200
z score	-0.491	-2.244	-0.491	-0.123	0.674	-1.226	2.453	1.104	-0.736	3.924	0.491	0.123	0.429	0.000	0.981	-1.840
1,2,3,7,8,9-HxCDD	7.675	9.155	8.015	8.025	8.745	7.415	10.495	8.475	7.705		8.280	9.185	8.655	7.800	8.960	6.685
z score	-0.781	1.130	-0.342	-0.329	0.600	-1.117	2.859	0.252	-0.742	3.576	0.000	1.168	0.484	-0.620	0.878	-2.059
1,2,3,4,6,7,8-HpCDD	58.85	65.50	62.75	71.15	65.20	59.35		66.10	60.35		65.55	64.65	64.80	60.95	67.55	56.45
z score	-1.269	0.060	-0.490	1.189	0.000	-1.169	3.118	0.180	-0.969	3.917	0.070	-0.110	-0.080	-0.849	0.470	-1.749
OCDD	108.50	123.50	109.00	133.00	116.50	98.25		113.00	106.00		124.00	114.00	109.00	103.00	135.50	96.55
z score	-0.571	0.986	-0.519	1.972	0.259	-1.634	5.033	-0.104	-0.830	4.151	1.038	0.000	-0.519	-1.141	2.231	-1.811
PCDF Isomer(異性体)																
2,3,7,8-TeCDF	8.145	10.040	9.080	9.055	9.730	9.030	10.020	9.870	7.830		9.745	7.935	8.190	8.825	9.505	7.550
z score	-1.689	1.001	-0.362	-0.397	0.561	-0.433	0.972	0.759	-2.136	2.577	0.582	-1.987	-1.625	-0.724	0.241	-2.534
1,2,3,7,8-PeCDF(単独分離)	15.40		15.00		15.50	13.90	16.55	16.10	13.40		18.40					13.05
z score	0.154		-0.154		0.231	-1.002	1.041	0.694	-1.388		2.467					-1.657
1,2,3,7,8-PeCDF(他と重なり)		34.35		33.95								33.65	34.25	26.25	35.65	
z score		0.150		-0.090						1.589		-0.270	0.090	-4.706	0.929	
2,3,4,7,8-PeCDF	28.70	34.60	28.75	28.15	30.90	28.40	32.30	33.35	27.35		34.60	33.15	31.65	31.10	34.10	27.15
z score	-1.083	1.329	-1.063	-1.308	-0.184	-1.206	0.388	0.818	-1.635	3.270	1.329	0.736	0.123	-0.102	1.124	-1.717
1,2,3,4,7,8-HxCDF(単独分離)	37.90		39.70		42.55	35.35	47.70	40.70	37.35		40.05					34.90
z score	-0.629		-0.077		0.797	-1.410	2.376	0.230	-0.797		0.031					-1.548
1,2,3,4,7,8-HxCDF(他と重なり)		42.450		46.200								45.200	43.850	41.000	44.500	
z score		-0.597		0.700						3.606		0.355	-0.112	-1.098	0.112	
1,2,3,6,7,8-HxCDF	35.85	39.75	38.00	40.35	40.65	35.95	45.00	41.30	36.25		38.20	39.20	39.05	34.20	39.45	34.25
z score	-1.016	0.222	-0.333	0.413	0.508	-0.984	1.889	0.714	-0.889	3.079	-0.270	0.048	0.000	-1.539	0.127	-1.524
1,2,3,7,8,9-HxCDF	2.120	3.060	2.000	2.070	2.565	2.150	3.275	2.005	1.765		2.790	2.280	2.460	2.390	2.410	2.135
z score	-0.585	1.807	-0.891	-0.713	0.547	-0.509	2.354	-0.878	-1.489	1.973	1.120	-0.178	0.280	0.102	0.153	-0.547
2,3,4,6,7,8-HxCDF(単独の値)	56.75	61.50	61.55	60.40	60.10	55.80	70.30	62.90	52.95		63.45	61.95	62.75	58.05	70.50	
z score	-1.378	0.015	0.029	-0.308	-0.396	-1.657	2.595	0.425	-2.493	3.739	0.587	0.147	0.381	-0.997	2.654	-3.021
										#						#

表-3

第18回ダイオキシン類分析 技能試験 結果 (模擬排水)

定量値単位 : pg/L

分析所番号	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1,2,3,4,6,7,8-HpCDF	198.5	220.5	214.5	219.0	207.0	210.0	264.0	238.5	185.0		240.5	200.0	214.5	169.5	228.5	189.0
z score	-0.881	0.330	0.000	0.248	-0.413	-0.248	2.725	1.321	-1.624	2.781	1.432	-0.798	0.000	-2.478	0.771	-1.404
1,2,3,4,7,8,9-HpCDF	18.85	19.10	20.95	23.25	22.95	19.90	26.95	23.50	18.30		24.55	23.75	23.60	19.35	22.30	18.95
z score	-1.724	-1.599	-0.674	0.475	0.325	-1.199	2.323	0.600	-1.998	4.322	1.124	0.724	0.650	-1.474	0.000	-1.674
OCDF	178.5	188.0	191.0	200.0	193.0	185.0		218.5	184.0	#	230.5	187.5	179.5	176.5	210.5	180.0
z score	-1.313	-0.620	-0.401	0.255	-0.255	-0.839	5.214	1.604	-0.911	4.776	2.479	-0.656	-1.240	-1.458	1.021	-1.203
TEQ Dioxin	34.627	39.555	35.789	38.317	37.786	34.015	41.553	39.178	33.249	#	39.652	39.405	39.958	35.737	41.269	31.949
z score	-1.042	0.584	-0.659	0.175	0.000	-1.244	1.243	0.459	-1.497	3.269	0.616	0.534	0.717	-0.676	1.149	-1.926
										#						
DD Homologue(同族体)																
TeCDDs	125.0	127.0	139.5	148.5	137.0	129.0	146.0	143.5	108.5		152.0	153.0	142.0	142.5	146.0	118.0
z score	-1.349	-1.199	-0.262	0.412	-0.450	-1.049	0.225	0.037	-2.586	0.787	0.674	0.749	-0.075	-0.037	0.225	-1.874
PeCDDs	132.0	152.0	142.5	157.0	147.5	136.0	156.5	163.0	134.0		169.0	151.0	158.0	142.0	162.5	125.5
z score	-1.844	-0.045	-0.899	0.405	-0.450	-1.484	0.360	0.944	-1.664	2.473	1.484	-0.135	0.495	-0.944	0.899	-2.428
HxCDDs	138.0	146.0	141.0	154.5	155.0	127.5	171.0	159.5	133.0		155.0	150.5	148.0	149.0	160.5	130.0
z score	-1.472	-0.491	-1.104	0.552	0.613	-2.759	2.575	1.165	-2.085	4.844	0.613	0.061	-0.245	-0.123	1.288	-2.453
										#						
HpCDDs	119.5	129.5	127.0	140.5	130.5	119.5	161.5	128.0	117.5		131.0	127.0	127.0	119.5	134.0	114.0
z score	-1.023	-0.093	-0.326	0.930	0.000	-1.023	2.884	-0.233	-1.209	3.628	0.047	-0.326	-0.326	-1.023	0.326	-1.535
										#						
OCDD(再掲)	108.5	123.5	109.0	133.0	116.5	98.3		113.0	106.0		124.0	114.0	109.0	103.0	135.5	96.6
z score	-0.571	0.986	-0.519	1.972	0.259	-1.634	5.033	-0.104	-0.830	4.151	1.038	0.000	-0.519	-1.141	2.231	-1.811
							#			#						
Total PCDDs	623.0	678.0	659.0	733.5	686.5	610.3	797.5	707.0	599.0		731.0	695.5	684.0	656.0	738.5	584.1
z score	-1.595	-0.234	-0.704	1.140	-0.024	-1.911	2.724	0.484	-2.189	3.937	1.078	0.199	-0.085	-0.778	1.264	-2.559
										#						
DF Homologue(同族体)																
TeCDFs	378.0	488.5	460.5	451.0	476.0	496.5	515.5	527.5	378.0		539.0	464.5	462.0	580.5	509.0	402.5
z score	-2.279	0.227	-0.408	-0.623	-0.057	0.408	0.839	1.111	-2.279	0.998	1.372	-0.317	-0.374	2.313	0.691	-1.723
PeCDFs		502.5	465.5	441.0	482.0	467.0	495.5	486.0	422.0		520.0	495.0	491.5	418.5	514.0	
z score	-3.225	1.054	-0.506	-1.539	0.190	-0.443	0.759	0.358	-2.340	3.499	1.792	0.738	0.590	-2.487	1.539	-3.562
	#								#						#	
HxCDFs	362.0	460.5	413.5	446.5	446.0	407.5	507.5	434.0	383.5		443.5	458.5	423.5	472.0	477.5	395.5
z score	-2.364	0.493	-0.870	0.087	0.073	-1.044	1.857	-0.276	-1.741	2.538	0.000	0.435	-0.580	0.827	0.986	-1.392
HpCDFs	305.5	315.0	312.5	330.0	309.5	310.5	391.5	349.0	272.5		355.5	300.0	346.5	251.5	338.0	282.0
z score	-0.378	-0.036	-0.126	0.504	-0.234	-0.198	2.716	1.187	-1.565	2.860	1.421	-0.576	1.097	-2.320	0.791	-1.223
OCDF(再掲)	178.5	188.0	191.0	200.0	193.0	185.0		218.5	184.0		230.5	187.5	179.5	176.5	210.5	180.0
z score	-1.313	-0.620	-0.401	0.255	-0.255	-0.839	5.214	1.604	-0.911	4.776	2.479	-0.656	-1.240	-1.458	1.021	-1.203
							#			#						
Total PCDFs	1625.0	1954.5	1843.0	1868.5	1906.5	1866.5	2178.0	2015.0	1640.0		2088.5	1905.5	1903.0	1899.0	2049.0	1653.0
z score	-2.646	0.451	-0.597	-0.357	0.000	-0.376	2.552	1.020	-2.505	3.431	1.711	-0.009	-0.033	-0.071	1.340	-2.383
										#						

表-3

第18回ダイオキシン類分析 技能試験 結果 (模擬排水)

定量値単位 : pg/L

分析所番号	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Total Homologues	2248.0	2632.5	2502.0	2602.0	2593.0	2476.8	2975.5	2722.0	2239.0		2819.5	2601.0	2587.0	2555.0	2787.5	2237.1
z score	-2.547	0.255	-0.696	0.033	-0.033	-0.880	2.755	0.907	-2.613	3.793	1.618	0.026	-0.077	-0.310	1.385	-2.627
										#						

DL-PCB																
3,4,4',5-TeCB(#81)	9.360	13.300	11.200	10.335	10.950	9.665	11.500	10.900	8.175	13.900	13.200	13.850	12.450	11.250	13.100	9.990
z score	-1.762	1.560	-0.211	-0.940	-0.422	-1.505	0.042	-0.464	-2.761	2.066	1.475	2.023	0.843	-0.169	1.391	-1.231
3,3',4,4'-TeCB(#77)	58.10	69.85	57.50	60.80	59.95	57.20	59.85	60.80	46.55	74.00	69.80	67.05	67.35	55.45	64.55	55.25
z score	-0.596	1.560	-0.707	-0.101	-0.257	-0.762	-0.275	-0.101	-2.716	2.322	1.551	1.046	1.101	-1.083	0.587	-1.120
3,3',4,4',5-PeCB(#126)	51.60	68.40	67.30	60.85	56.85	51.40	67.60	58.35	48.70	72.10	61.25	74.30	63.80	63.70	58.70	49.30
z score	-1.333	1.302	1.129	0.118	-0.510	-1.365	1.176	-0.275	-1.788	1.882	0.180	2.227	0.580	0.565	-0.220	-1.694
3,3',4,4',5,5'-HxCB(#169)	18.40	19.60	19.70	20.35	19.45	16.30	21.90	22.25	16.85	23.25	22.10	22.40	17.80	18.25	21.85	18.10
z score	-0.626	-0.048	0.000	0.313	-0.120	-1.638	1.060	1.229	-1.373	1.710	1.156	1.301	-0.915	-0.699	1.036	-0.771
2',3,4,4',5-PeCB(#123)	3.555	4.620	4.340	4.400	3.930	4.030	4.575	3.855	3.070	5.505	3.790	4.865	4.190	4.315	4.315	3.785
z score	-1.520	0.624	0.060	0.181	-0.765	-0.564	0.534	-0.916	-2.497	2.406	-1.047	1.117	-0.242	0.010	0.010	-1.057
2,3',4,4',5-PeCB(#118)	25.60	34.75	23.25	27.85	23.45	20.70	23.80	20.70	19.00	25.50	23.25	28.20	27.90	22.25	24.25	22.40
z score	0.289	2.248	-0.214	0.771	-0.171	-0.760	-0.096	-0.760	-1.124	0.268	-0.214	0.846	0.782	-0.428	0.000	-0.396
2,3,3',4,4'-PeCB(#105)	25.55	29.50	26.80	30.00	28.45	24.75	29.95	27.75	20.70		28.90	30.60	29.05	26.90	28.05	24.85
z score	-1.116	0.200	-0.699	0.366	-0.150	-1.382	0.350	-0.383	-2.731	3.497	0.000	0.566	0.050	-0.666	-0.283	-1.349
										#						
2,3,4,4',5-PeCB(#114)	4.790	6.510	5.845	6.345	6.255	5.410	6.345	5.500	4.430	8.180	6.780	7.455	6.700	5.630	6.155	5.600
z score	-2.107	0.401	-0.569	0.160	0.029	-1.203	0.160	-1.072	-2.632	2.837	0.795	1.779	0.678	-0.882	-0.117	-0.926
2,3',4,4',5,5'-HxCB(#167)	10.375	13.550	10.950	11.000	11.400	10.500	11.600	11.150	7.630	13.650	11.900	13.150	12.000	11.550	11.650	10.200
z score	-0.881	1.499	-0.450	-0.412	-0.112	-0.787	0.037	-0.300	-2.938	1.574	0.262	1.199	0.337	0.000	0.075	-1.012
2,3,3',4,4',5-HxCB(#156)	32.90	39.55	32.20	34.50	32.70	27.45	33.10	34.00		38.65	31.40	36.75	33.15	30.60	32.40	28.45
z score	-0.102	2.616	-0.388	0.552	-0.184	-2.330	-0.020	0.347	-3.986	2.248	-0.715	1.472	0.000	-1.042	-0.307	-1.921
									#							
2,3,3',4,4',5'-HxCB(#157)	14.70	18.95	15.40	16.75	16.00	12.95	17.20	15.25	11.60	18.15	16.25	17.90	15.75	14.25	16.85	13.65
z score	-0.835	1.895	-0.385	0.482	0.000	-1.959	0.771	-0.482	-2.826	1.381	0.161	1.221	-0.161	-1.124	0.546	-1.510
2,3,3',4,4',5,5'-HpCB(#189)	26.15	29.10	27.65	30.45	28.05	22.90	32.25	27.50	22.50	35.60	28.40	29.95	28.30	27.00	30.40	25.75
z score	-0.763	0.284	-0.231	0.763	-0.089	-1.917	1.402	-0.284	-2.059	2.591	0.035	0.586	0.000	-0.461	0.745	-0.905
TEQ DL-PCB	5.725	7.444	7.335	6.710	6.282	5.641	7.431	6.516	5.386	7.925	6.803	8.118	6.929	6.931	6.541	5.486
z score	-1.279	1.258	1.096	0.174	-0.457	-1.402	1.239	-0.111	-1.779	1.967	0.312	2.252	0.498	0.500	-0.076	-1.632
TEQ DXN + DL-PCB	40.352	46.999	43.124	45.027	44.068	39.657	48.984	45.694	38.634	55.617	46.455	47.523	46.887	42.668	47.809	37.435
z score	-1.209	0.740	-0.396	0.162	-0.119	-1.413	1.322	0.357	-1.713	3.267	0.581	0.894	0.707	-0.530	0.978	-2.064
										#						

表-3

第18回ダイオキシン類分析 技能試験 結果 (模擬排水)

定量値単位 : pg/L

分析所番号	17	18	19	20	21	23	24	25	26	27	28	29	30	31	32	33
PCDD Isomer(異性体)																
2,3,7,8-TeCDD	1.070	1.145	1.063	1.055	1.025	1.005	1.095	1.030	1.044	1.175		0.909	1.085	0.985	1.070	0.905
z score	0.000	0.672	-0.067	-0.134	-0.403	-0.587	0.224	-0.359	-0.233	0.941	0.762	-1.448	0.134	-0.766	0.000	-1.483
1,2,3,7,8-PeCDD	6.035	5.830	5.785	6.350	5.980	6.065	5.175	5.850	5.895	5.965		5.575	5.880	5.495	6.990	5.120
z score	0.393	-0.042	-0.138	1.062	0.276	0.457	-1.434	0.000	0.096	0.244	1.869	-0.584	0.064	-0.754	2.422	-1.551
1,2,3,4,7,8-HxCDD	5.570	5.180	5.350	5.885	4.830	5.885	5.670	5.155	4.935	5.440		5.435	5.910	4.565	5.775	5.110
z score	0.000	-0.746	-0.421	0.603	-1.416	0.603	0.191	-0.794	-1.215	-0.249	2.229	-0.258	0.651	-1.923	0.392	-0.880
1,2,3,6,7,8-HxCDD	11.700	11.350	10.700	11.750	11.050	12.400	11.550	11.600	11.000	10.600		11.250	12.150	10.750	11.300	11.550
z score	0.000	-0.429	-1.226	0.061	-0.797	0.858	-0.184	-0.123	-0.858	-1.349	5.641	-0.552	0.552	-1.165	-0.491	-0.184
1,2,3,7,8,9-HxCDD	8.330	8.060	7.790	8.115	7.835	8.490	8.360	7.850	7.955	7.965		7.960	9.675	7.905	8.720	7.560
z score	0.065	-0.284	-0.633	-0.213	-0.574	0.271	0.103	-0.555	-0.420	-0.407	2.098	-0.413	1.801	-0.484	0.568	-0.929
1,2,3,4,6,7,8-HpCDD	64.80	69.35	66.80	67.30	65.25	69.10	65.15	62.25	60.80	62.15		61.50	70.90	62.15	71.20	65.75
z score	-0.080	0.829	0.320	0.420	0.010	0.779	-0.010	-0.590	-0.879	-0.610	3.757	-0.739	1.139	-0.610	1.199	0.110
OCDD	109.00	116.00	121.50	119.00	108.50	126.50	108.50	111.50	104.50	101.95		108.50	119.00	111.00	120.00	117.00
z score	-0.519	0.208	0.778	0.519	-0.571	1.297	-0.571	-0.259	-0.986	-1.250	3.891	-0.571	0.519	-0.311	0.623	0.311
PCDF Isomer(異性体)																
2,3,7,8-TeCDF	8.895	11.200	7.750	8.775	9.070	10.020	8.235	9.265	9.120	10.270		9.975	9.195	9.335	8.490	8.790
z score	-0.625	2.648	-2.250	-0.795	-0.376	0.972	-1.562	-0.099	-0.305	1.327	6.551	0.909	-0.199	0.000	-1.200	-0.774
1,2,3,7,8-PeCDF(単独分離)		15.85		17.05	14.10	14.45		14.90	15.20	14.50		14.15	16.45	13.75		16.25
z score		0.501		1.426	-0.848	-0.578		-0.231	0.000	-0.540	3.160	-0.809	0.964	-1.118		0.809
1,2,3,7,8-PeCDF(他と重なり)	33.40		32.05				30.15								33.75	
z score	-0.420		-1.229				-2.368								-0.210	
2,3,4,7,8-PeCDF	31.90	32.95	30.25	34.15	29.55	30.95	29.85	30.95	31.35	31.70		30.00	31.50	27.60	31.45	33.65
z score	0.225	0.654	-0.450	1.145	-0.736	-0.164	-0.613	-0.164	0.000	0.143	5.212	-0.552	0.061	-1.533	0.041	0.940
1,2,3,4,7,8-HxCDF(単独分離)		42.15		44.10	39.95	41.70		38.60	37.85	36.90		38.75	41.75	37.30		42.10
z score		0.674		1.272	0.000	0.537		-0.414	-0.644	-0.935	3.940	-0.368	0.552	-0.812		0.659
1,2,3,4,7,8-HxCDF(他と重なり)	41.550		42.000				42.050								44.800	
z score	-0.908		-0.752				-0.735								0.216	
1,2,3,6,7,8-HxCDF	39.05	40.10	38.05	42.20	37.10	39.05	37.50	36.90	37.45	37.75		36.15	40.60	36.75	43.00	41.05
z score	0.000	0.333	-0.317	1.000	-0.619	0.000	-0.492	-0.682	-0.508	-0.413	2.682	-0.920	0.492	-0.730	1.254	0.635
1,2,3,7,8,9-HxCDF	2.390	2.075	2.880	2.795	2.270	2.370	1.505	2.425	2.305	2.220		2.235	2.605	2.485	2.370	2.015
z score	0.102	-0.700	1.349	1.133	-0.204	0.051	-2.151	0.191	-0.115	-0.331	2.723	-0.293	0.649	0.344	0.051	-0.853
2,3,4,6,7,8-HxCDF(単独の値)	60.30	62.90	58.90			62.60	57.50	60.05	55.75	59.35		59.35	62.55	58.70	69.65	61.85
z score	-0.337	0.425	-0.748			0.337	-1.158	-0.411	-1.672	-0.616		-0.616	0.323	-0.806	2.405	0.117

表-3

第18回ダイオキシン類分析 技能試験 結果 (模擬排水)

定量値単位 : pg/L

分析所番号	17	18	19	20	21	23	24	25	26	27	28	29	30	31	32	33
1,2,3,4,6,7,8-HpCDF	207.0	228.5	214.5	208.0	208.5	193.5	219.0	210.0	200.5	196.5		181.0	223.0	199.0	222.0	242.0
z score	-0.413	0.771	0.000	-0.358	-0.330	-1.156	0.248	-0.248	-0.771	-0.991	2.863	-1.845	0.468	-0.853	0.413	1.514
1,2,3,4,7,8,9-HpCDF	22.30	22.30	22.00	23.20	21.10	22.65	19.65	20.60	20.90	22.25		20.10	25.05	19.65	24.25	22.80
z score	0.000	0.000	-0.150	0.450	-0.600	0.175	-1.324	-0.849	-0.699	-0.025	3.098	-1.099	1.374	-1.324	0.974	0.250
OCDF	189.0	208.5	195.0	214.5	192.5	206.0	189.5	196.5	196.5	197.5	#	185.5	197.0	189.0	200.0	208.0
z score	-0.547	0.875	-0.109	1.313	-0.292	0.693	-0.510	0.000	0.000	0.073	6.016	-0.802	0.036	-0.547	0.255	0.839
TEQ Dioxin	38.486	38.936	37.354	39.864	36.927	37.992	36.494	36.817	36.349	37.033	#	35.733	38.636	34.849	41.189	38.013
z score	0.231	0.379	-0.143	0.686	-0.283	0.068	-0.426	-0.320	-0.474	-0.248	3.824	-0.678	0.281	-0.969	1.123	0.075
											#					
DD Homologue(同族体)																
TeCDDs	145.5	143.0	139.0	145.5	137.0	148.0	155.0	127.5	145.5	152.0		133.5	168.0	115.5	153.5	133.5
z score	0.187	0.000	-0.300	0.187	-0.450	0.375	0.899	-1.162	0.187	0.674	2.286	-0.712	1.874	-2.061	0.787	-0.712
PeCDDs	155.5	147.5	153.0	158.5	153.0	153.0	156.5	143.5	143.5	155.0		156.5	163.0	138.0	164.0	139.0
z score	0.270	-0.450	0.045	0.540	0.045	0.045	0.360	-0.809	-0.809	0.225	2.968	0.360	0.944	-1.304	1.034	-1.214
HxCDDs	145.0	146.5	148.0	149.5	139.0	155.0	156.0	139.5	150.0	151.5		144.0	164.5	129.5	166.5	137.5
z score	-0.613	-0.429	-0.245	-0.061	-1.349	0.613	0.736	-1.288	0.000	0.184	5.703	-0.736	1.778	-2.514	2.023	-1.533
											#					
HpCDDs	128.5	143.0	137.0	133.5	133.0	138.5	130.0	122.5	120.0	127.0		121.5	142.5	122.0	141.0	130.0
z score	-0.186	1.163	0.605	0.279	0.233	0.744	-0.047	-0.744	-0.977	-0.326	3.814	-0.837	1.116	-0.791	0.977	-0.047
											#					
OCDD(再掲)	109.0	116.0	121.5	119.0	108.5	126.5	108.5	111.5	104.5	102.0		108.5	119.0	111.0	120.0	117.0
z score	-0.519	0.208	0.778	0.519	-0.571	1.297	-0.571	-0.259	-0.986	-1.250	3.891	-0.571	0.519	-0.311	0.623	0.311
											#					
Total PCDDs	683.5	696.0	698.5	706.0	670.5	721.0	706.0	644.5	663.5	687.5		664.0	757.0	616.0	745.0	657.0
z score	-0.098	0.212	0.274	0.459	-0.420	0.830	0.459	-1.063	-0.593	0.000	4.729	-0.580	1.721	-1.769	1.424	-0.754
											#					
DF Homologue(同族体)																
TeCDFs	480.5	480.5	435.0	465.0	474.0	526.5	475.5	454.0	470.5	465.5		512.0	579.0	434.0	479.0	484.5
z score	0.045	0.045	-0.986	-0.306	-0.102	1.088	-0.068	-0.555	-0.181	-0.295	4.704	0.760	2.279	-1.009	0.011	0.136
											#					
PeCDFs	480.5	464.0	475.5	485.5	461.0	463.0	463.0	469.5	468.0	458.0		476.5	534.5	413.0	477.5	508.0
z score	0.126	-0.569	-0.084	0.337	-0.696	-0.611	-0.611	-0.337	-0.400	-0.822	7.567	-0.042	2.403	-2.719	0.000	1.286
											#					
HxCDFs	422.5	437.0	444.5	452.5	412.5	461.5	438.5	410.0	438.5	422.0		440.5	461.5	413.5	456.0	455.5
z score	-0.609	-0.189	0.029	0.261	-0.899	0.522	-0.145	-0.972	-0.145	-0.624	3.945	-0.087	0.522	-0.870	0.363	0.348
											#					
HpCDFs	307.5	333.5	315.5	319.0	308.0	287.0	318.5	320.0	302.0	299.5		267.0	335.5	308.5	333.0	348.5
z score	-0.306	0.630	-0.018	0.108	-0.288	-1.043	0.090	0.144	-0.504	-0.594	4.497	-1.763	0.701	-0.270	0.612	1.169
											#					
OCDF(再掲)	189.0	208.5	195.0	214.5	192.5	206.0	189.5	196.5	196.5	197.5		185.5	197.0	189.0	200.0	208.0
z score	-0.547	0.875	-0.109	1.313	-0.292	0.693	-0.510	0.000	0.000	0.073	6.016	-0.802	0.036	-0.547	0.255	0.839
											#					
Total PCDFs	1880.0	1923.5	1865.5	1936.5	1848.0	1944.0	1885.0	1850.0	1875.5	1842.5		1881.5	2107.5	1758.0	1945.5	2004.5
z score	-0.249	0.160	-0.385	0.282	-0.550	0.353	-0.202	-0.531	-0.291	-0.602	6.919	-0.235	1.890	-1.396	0.367	0.921
											#					

表-3

第18回ダイオキシン類分析 技能試験 結果 (模擬排水)

定量値単位 : pg/L

分析所番号	17	18	19	20	21	23	24	25	26	27	28	29	30	31	32	33
Total Homologues	2563.5	2619.5	2564.0	2642.5	2518.5	2665.0	2591.0	2494.5	2539.0	2530.0		2545.5	2864.5	2374.0	2690.5	2661.5
z score	-0.248	0.160	-0.244	0.328	-0.576	0.492	-0.047	-0.751	-0.426	-0.492	6.730	-0.379	1.946	-1.629	0.678	0.466
											#					

DL-PCB																
3,4,4',5-TeCB(#81)	11.950	9.860	12.550	11.250	11.650	11.550	10.600	11.450	10.700	10.950	13.250	11.300	12.400	9.990	11.850	11.300
z score	0.422	-1.341	0.927	-0.169	0.169	0.084	-0.717	0.000	-0.632	-0.422	1.518	-0.126	0.801	-1.231	0.337	-0.126
3,3',4,4'-TeCB(#77)	64.00	57.65	64.20	56.80	63.50	57.55	59.40	59.50	58.15	62.90	73.10	58.70	68.10	55.35	61.90	65.05
z score	0.486	-0.679	0.523	-0.835	0.395	-0.697	-0.358	-0.340	-0.587	0.284	2.157	-0.486	1.239	-1.101	0.101	0.679
3,3',4,4',5-PeCB(#126)	59.95	58.80	59.30	60.65	60.10	64.50	53.40	56.15	60.25	58.15	71.30	59.75	63.45	51.95	57.80	64.50
z score	-0.024	-0.204	-0.125	0.086	0.000	0.690	-1.051	-0.620	0.024	-0.306	1.757	-0.055	0.525	-1.278	-0.361	0.690
3,3',4,4',5,5'-HxCB(#169)	19.40	18.30	20.20	20.80	19.00	20.55	16.65	19.40	17.60	19.75	25.00	18.85	20.95	17.60	21.50	21.20
z score	-0.145	-0.674	0.241	0.530	-0.337	0.410	-1.469	-0.145	-1.012	0.024	2.553	-0.410	0.602	-1.012	0.867	0.723
2',3,4,4',5-PeCB(#123)	4.385	3.515	4.680	4.980	4.765	4.630	3.885	4.350	3.960	3.610	5.135	4.015	4.595	3.150	4.365	4.155
z score	0.151	-1.601	0.745	1.349	0.916	0.644	-0.856	0.081	-0.705	-1.409	1.661	-0.594	0.574	-2.336	0.111	-0.312
2,3',4,4',5-PeCB(#118)	25.10	19.90	37.35	25.00	21.20	28.90	20.55	22.90	22.25	21.90	26.30	22.60	26.55	20.45	30.50	23.90
z score	0.182	-0.931	2.805	0.161	-0.653	0.996	-0.792	-0.289	-0.428	-0.503	0.439	-0.353	0.492	-0.814	1.338	-0.075
2,3,3',4,4'-PeCB(#105)	29.55	24.80	28.40	25.95	25.65	30.45	23.45	26.50	27.65	25.95	32.55	27.60	29.55	22.15	31.70	29.30
z score	0.217	-1.366	-0.167	-0.983	-1.083	0.516	-1.815	-0.799	-0.416	-0.983	1.216	-0.433	0.217	-2.248	0.933	0.133
2,3,4,4',5-PeCB(#114)	6.645	5.435	6.550	6.535	6.240	6.570	5.140	6.030	6.110	5.870	7.710	6.265	6.900	5.715	6.465	5.920
z score	0.598	-1.167	0.459	0.438	0.007	0.489	-1.597	-0.299	-0.182	-0.532	2.151	0.044	0.970	-0.758	0.335	-0.459
2,3',4,4',5,5'-HxCB(#167)	11.850	10.250	10.550	13.150	11.000	11.050	9.000	11.200	11.400	11.400	14.150	10.700	12.550	9.715	11.950	12.200
z score	0.225	-0.974	-0.749	1.199	-0.412	-0.375	-1.911	-0.262	-0.112	-0.112	1.949	-0.637	0.749	-1.375	0.300	0.487
2,3,3',4,4',5-HxCB(#156)	35.50	28.35	33.15	38.20	33.70	32.55	31.35	32.95	29.20	33.00	38.55	33.40	35.10	30.90	36.15	36.90
z score	0.961	-1.962	0.000	2.064	0.225	-0.245	-0.736	-0.082	-1.615	-0.061	2.207	0.102	0.797	-0.920	1.226	1.533
2,3,3',4,4',5'-HxCB(#157)	16.05	13.90	15.85	17.35	15.45	15.65	13.75	14.90	14.30	15.15	19.50	15.50	16.20	12.90	16.65	18.20
z score	0.032	-1.349	-0.096	0.867	-0.353	-0.225	-1.445	-0.707	-1.092	-0.546	2.248	-0.321	0.128	-1.991	0.418	1.413
2,3,3',4,4',5,5'-HpCB(#189)	28.20	24.65	26.20	30.20	28.50	27.20	24.35	27.35	28.65	27.15	32.80	25.05	28.45	26.10	31.05	32.00
z score	-0.035	-1.296	-0.745	0.674	0.071	-0.390	-1.402	-0.337	0.124	-0.408	1.597	-1.154	0.053	-0.781	0.976	1.313
TEQ DL-PCB	6.592	6.442	6.551	6.703	6.594	7.080	5.853	6.211	6.566	6.421	7.897	6.554	6.989	5.735	6.440	7.101
z score	0.000	-0.221	-0.060	0.164	0.004	0.721	-1.091	-0.562	-0.037	-0.251	1.925	-0.055	0.586	-1.263	-0.224	0.751
TEQ DXN + DL-PCB	45.078	45.377	43.905	46.566	43.522	45.072	42.346	43.028	42.915	43.455		42.287	45.625	40.584	47.628	45.113
z score	0.177	0.265	-0.167	0.613	-0.280	0.175	-0.624	-0.424	-0.457	-0.299	3.752	-0.642	0.337	-1.141	0.925	0.187
											#					

表-3

第18回ダイオキシン類分析 技能試験 結果 (模擬排水)

定量値単位 : pg/L

分析所番号	34	35	36R	37	38	40	41	42	43	44	45	46	47	48	49	50
PCDD Isomer(異性体)																
2,3,7,8-TeCDD	1.155	0.889	1.070	1.275	1.095	1.140	1.410	0.847	1.046	1.200	0.918	0.892	1.100	1.020	0.957	1.205
z score	0.762	-1.622	0.000	1.837	0.224	0.627	3.048	-2.003	-0.215	1.165	-1.362	-1.595	0.269	-0.448	-1.013	1.210
							#									
1,2,3,7,8-PeCDD	5.180	5.830	5.550	6.330	6.550	6.655	4.960	5.450	6.450	5.445	5.590	5.895	6.045	5.795	5.990	6.305
z score	-1.423	-0.042	-0.637	1.020	1.487	1.710	-1.891	-0.850	1.275	-0.860	-0.552	0.096	0.414	-0.117	0.297	0.967
1,2,3,4,7,8-HxCDD	5.640	5.845	5.805	6.120	6.415	6.145	5.435	4.750	5.910	5.365	4.905	5.050	5.425	5.840	5.595	5.980
z score	0.134	0.526	0.450	1.052	1.617	1.100	-0.258	-1.569	0.651	-0.392	-1.272	-0.995	-0.277	0.517	0.048	0.785
1,2,3,6,7,8-HxCDD	12.800	10.650	13.000	12.500		11.550	9.855	11.350	12.700	11.100	11.900	10.950	12.200	12.550	12.350	12.750
z score	1.349	-1.288	1.594	0.981	3.434	-0.184	-2.263	-0.429	1.226	-0.736	0.245	-0.920	0.613	1.042	0.797	1.288
					#											
1,2,3,7,8,9-HxCDD	7.735	8.620	9.565	9.150	9.420	8.120	7.025	7.910	8.890	7.735	8.040	7.620	8.570	8.455	7.855	9.065
z score	-0.704	0.439	1.659	1.123	1.472	-0.207	-1.620	-0.478	0.787	-0.704	-0.310	-0.852	0.374	0.226	-0.549	1.013
1,2,3,4,6,7,8-HpCDD	61.80	62.60	73.05	67.90	75.15	69.50	57.05	57.75	65.70	68.10	66.70	60.95	68.10	64.05	66.95	71.10
z score	-0.679	-0.520	1.569	0.540	1.988	0.859	-1.629	-1.489	0.100	0.580	0.300	-0.849	0.580	-0.230	0.350	1.179
OCDD	123.00	103.95	129.00	122.50		115.50	99.90	106.00	133.50	121.00	113.50	106.00	119.50	113.50	117.50	124.00
z score	0.934	-1.043	1.557	0.882	3.009	0.156	-1.463	-0.830	2.023	0.726	-0.052	-0.830	0.571	-0.052	0.363	1.038
					#											
PCDF Isomer(異性体)																
2,3,7,8-TeCDF	9.045	7.880	9.165	9.750	9.030	11.200	9.755	8.550	10.400	9.320	9.235	9.650	10.600	9.190	9.460	9.845
z score	-0.412	-2.066	-0.241	0.589	-0.433	2.648	0.596	-1.114	1.512	-0.021	-0.142	0.447	1.796	-0.206	0.177	0.724
1,2,3,7,8-PeCDF(単独分離)	15.90	14.50	15.35	17.05				14.55		11.60		13.85	15.00	16.45	15.40	17.20
z score	0.540	-0.540	0.116	1.426			-4.891	-0.501	3.083	-2.775		-1.041	-0.154	0.964	0.154	1.542
							#		#							
1,2,3,7,8-PeCDF(他と重なり)					35.20	31.70					36.45					
z score					0.660	-1.439					1.409					
2,3,4,7,8-PeCDF	31.60	24.95	24.15	33.20	31.95	33.15	26.80	25.55	36.10	29.90	30.00	28.15	33.35	31.45	33.60	32.95
z score	0.102	-2.616	-2.943	0.756	0.245	0.736	-1.860	-2.371	1.942	-0.593	-0.552	-1.308	0.818	0.041	0.920	0.654
1,2,3,4,7,8-HxCDF(単独分離)	40.85	35.55	42.05	42.80			35.30	37.75	44.50	41.75		38.85	40.85	42.50	37.85	42.05
z score	0.276	-1.349	0.644	0.874			-1.426	-0.674	1.395	0.552		-0.337	0.276	0.782	-0.644	0.644
1,2,3,4,7,8-HxCDF(他と重なり)					45.650	46.400					40.200					
z score					0.510	0.770					-1.375					
1,2,3,6,7,8-HxCDF	35.85	42.95	41.75	39.75	40.55	41.10	30.85	37.65	47.65	35.75	40.90	39.00	39.85	41.55	38.40	41.70
z score	-1.016	1.238	0.857	0.222	0.476	0.651	-2.603	-0.444	2.730	-1.047	0.587	-0.016	0.254	0.794	-0.206	0.841
1,2,3,7,8,9-HxCDF	1.710	1.595	2.150	1.690	2.765	2.990	1.930	1.705		1.955	1.790	2.620	2.465	2.130	2.100	2.600
z score	-1.629	-1.922	-0.509	-1.680	1.056	1.629	-1.069	-1.642	5.969	-1.005	-1.425	0.687	0.293	-0.560	-0.636	0.636
									#							
2,3,4,6,7,8-HxCDF(単独の値)	51.25	61.15	66.45	62.10	62.50	65.85		55.65	58.75		61.55	70.95	61.40	62.60	60.70	63.30
z score	-2.991	-0.088	1.466	0.191	0.308	1.290		-1.701	-0.792	-3.490	0.029	2.786	-0.015	0.337	-0.220	0.543
										#						

表-3

第18回ダイオキシン類分析 技能試験 結果 (模擬排水)

定量値単位 : pg/L

分析所番号	34	35	36R	37	38	40	41	42	43	44	45	46	47	48	49	50
1,2,3,4,6,7,8-HpCDF	225.5	189.0	202.0	240.0	218.0	206.0		196.5	252.0	206.0	217.0	169.0	219.5	227.0	221.0	223.0
z score	0.606	-1.404	-0.688	1.404	0.193	-0.468	-4.570	-0.991	2.065	-0.468	0.138	-2.505	0.275	0.688	0.358	0.468
							#									
1,2,3,4,7,8,9-HpCDF	22.80	23.50	21.40	23.80	23.85	23.85		19.20	23.00	22.65	23.10	22.35	22.30	21.65	23.95	22.70
z score	0.250	0.600	-0.450	0.749	0.774	0.774	-3.422	-1.549	0.350	0.175	0.400	0.025	0.000	-0.325	0.824	0.200
							#									
OCDF	202.5	176.5	203.0	202.5	204.5	185.0		167.0	225.0	188.0	202.5	178.5	201.5	198.5	202.0	216.0
z score	0.438	-1.458	0.474	0.438	0.583	-0.839	-4.740	-2.151	2.078	-0.620	0.438	-1.313	0.365	0.146	0.401	1.422
							#									
TEQ Dioxin	35.979	34.898	36.993	39.877	40.643	41.110	31.895	33.746	41.766	35.276	37.616	36.725	38.931	38.446	38.135	39.910
z score	-0.596	-0.953	-0.262	0.690	0.943	1.097	-1.944	-1.333	1.313	-0.828	-0.056	-0.350	0.378	0.218	0.115	0.701
DD Homologue(同族体)																
TeCDDs	143.5	155.5	129.5	147.5	157.0	167.0	138.0	142.0	124.0	118.0	138.0	127.0	147.5	141.0	144.5	162.0
z score	0.037	0.937	-1.012	0.337	1.049	1.799	-0.375	-0.075	-1.424	-1.874	-0.375	-1.199	0.337	-0.150	0.112	1.424
PeCDDs	136.0	155.5	154.5	152.5	159.5	152.5	144.0	152.0	159.0	157.0	154.0	139.5	160.5	163.0	149.5	166.0
z score	-1.484	0.270	0.180	0.000	0.630	0.000	-0.764	-0.045	0.585	0.405	0.135	-1.169	0.719	0.944	-0.270	1.214
HxCDDs	154.0	158.0	158.0	154.5		154.5	133.5	148.5	151.5	153.5	156.0	142.0	148.0	160.0	149.5	160.5
z score	0.491	0.981	0.981	0.552	3.189	0.552	-2.023	-0.184	0.184	0.429	0.736	-0.981	-0.245	1.226	-0.061	1.288
					#											
HpCDDs	123.0	133.5	144.5	131.5	149.0	137.5	118.0	121.0	135.0	135.5	131.0	123.0	134.0	130.5	132.5	139.0
z score	-0.698	0.279	1.302	0.093	1.721	0.651	-1.163	-0.884	0.419	0.465	0.047	-0.698	0.326	0.000	0.186	0.791
OCDD(再掲)	123.0	104.0	129.0	122.5		115.5	99.9	106.0	133.5	121.0	113.5	106.0	119.5	113.5	117.5	124.0
z score	0.934	-1.043	1.557	0.882	3.009	0.156	-1.463	-0.830	2.023	0.726	-0.052	-0.830	0.571	-0.052	0.363	1.038
					#											
Total PCDDs	679.5	706.5	715.5	708.5	784.5	727.0	633.4	669.5	703.0	685.0	692.5	637.5	709.5	708.0	693.5	751.5
z score	-0.197	0.470	0.694	0.521	2.402	0.979	-1.338	-0.444	0.385	-0.061	0.125	-1.236	0.546	0.509	0.150	1.585
DF Homologue(同族体)																
TeCDFs	471.5	523.5	442.5	441.0	513.5	481.0	593.5	479.0	458.0	446.0	433.0	456.0	513.5	521.5	540.5	487.5
z score	-0.159	1.020	-0.816	-0.850	0.794	0.057	2.607	0.011	-0.465	-0.737	-1.032	-0.510	0.794	0.975	1.406	0.204
PeCDFs	492.5	495.0	475.0	480.0	516.5	460.0	457.5	452.5	532.5	483.0	474.0	424.5	466.0	522.0	493.0	495.0
z score	0.632	0.738	-0.105	0.105	1.644	-0.738	-0.843	-1.054	2.319	0.232	-0.148	-2.234	-0.485	1.876	0.653	0.738
HxCDFs	399.0	440.5	455.0	467.5	476.5	472.5	447.0	402.0	461.5	414.0	440.5	448.5	445.5	474.0	427.5	459.0
z score	-1.291	-0.087	0.334	0.696	0.957	0.841	0.102	-1.204	0.522	-0.856	-0.087	0.145	0.058	0.885	-0.464	0.450
HpCDFs	344.0	300.0	309.0	354.5	340.5	345.5	242.5	286.5	365.0	309.0	315.5	257.5	320.5	330.5	328.5	348.5
z score	1.007	-0.576	-0.252	1.385	0.881	1.061	-2.644	-1.061	1.763	-0.252	-0.018	-2.104	0.162	0.522	0.450	1.169
OCDF(再掲)	202.5	176.5	203.0	202.5	204.5	185.0		167.0	225.0	188.0	202.5	178.5	201.5	198.5	202.0	216.0
z score	0.438	-1.458	0.474	0.438	0.583	-0.839	-4.740	-2.151	2.078	-0.620	0.438	-1.313	0.365	0.146	0.401	1.422
							#									
Total PCDFs	1909.5	1935.5	1884.5	1945.5	2051.5	1944.0	1872.0	1787.0	2042.0	1840.0	1865.5	1765.0	1947.0	2046.5	1991.5	2006.0
z score	0.028	0.273	-0.207	0.367	1.363	0.353	-0.324	-1.123	1.274	-0.625	-0.385	-1.330	0.381	1.316	0.799	0.935

表-3

第18回ダイオキシン類分析 技能試験 結果 (模擬排水)

定量値単位 : pg/L

分析所番号	34	35	36R	37	38	40	41	42	43	44	45	46	47	48	49	50
Total Homologues	2589.0	2642.0	2600.0	2654.0	2836.0	2671.0	2505.4	2456.5	2745.0	2525.0	2558.0	2402.5	2656.5	2754.5	2685.0	2757.5
z score	-0.062	0.324	0.018	0.412	1.738	0.536	-0.671	-1.028	1.075	-0.528	-0.288	-1.421	0.430	1.144	0.638	1.166

DL-PCB																
3,4,4',5-TeCB(#81)	11.100	10.030	10.205	11.600	11.200	11.750	10.350	11.850	11.500	12.000	12.300	10.650	11.950	11.850	11.700	12.950
z score	-0.295	-1.197	-1.050	0.126	-0.211	0.253	-0.927	0.337	0.042	0.464	0.717	-0.674	0.422	0.337	0.211	1.265
3,3',4,4'-TeCB(#77)	55.35	51.90	51.55	56.85	58.40	63.75	52.85	62.20	68.55	65.45	62.75	54.50	65.85	66.15	64.05	63.65
z score	-1.101	-1.734	-1.799	-0.826	-0.541	0.440	-1.560	0.156	1.321	0.752	0.257	-1.257	0.826	0.881	0.496	0.422
3,3',4,4',5-PeCB(#126)	54.45	65.65	62.40	69.70	59.00	60.95	55.40	55.70	68.55	66.85	62.45	47.90	65.60	59.40	60.75	67.40
z score	-0.886	0.871	0.361	1.506	-0.173	0.133	-0.737	-0.690	1.325	1.059	0.369	-1.914	0.863	-0.110	0.102	1.145
3,3',4,4',5,5'-HxCB(#169)	19.55	19.00	22.30	20.95	21.40	17.85	17.45	18.80		18.20	19.95	19.55	21.75	21.15	20.60	21.80
z score	-0.072	-0.337	1.253	0.602	0.819	-0.891	-1.084	-0.434	3.758	-0.723	0.120	-0.072	0.988	0.699	0.434	1.012
									#							
2',3,4,4',5-PeCB(#123)		4.095	3.980	5.275	4.345	4.220	4.015	4.215	3.385		4.235	3.885	4.675	4.300	4.310	4.805
z score	3.081	-0.433	-0.664	1.943	0.070	-0.181	-0.594	-0.191	-1.862	3.020	-0.151	-0.856	0.735	-0.020	0.000	0.997
	#								#							
2,3',4,4',5-PeCB(#118)		21.55	19.35	30.75	27.65	24.50	19.55	35.15	29.10	30.60		21.75	24.25	23.95	21.70	26.25
z score	3.351	-0.578	-1.049	1.392	0.728	0.054	-1.006	2.334	1.039	1.360	3.094	-0.535	0.000	-0.064	-0.546	0.428
	#								#							
2,3,3',4,4'-PeCB(#105)	30.35	26.45	23.45	30.60	26.40	28.40	25.20	31.25	31.40	30.40	32.50	23.25	30.25	29.05	28.10	29.95
z score	0.483	-0.816	-1.815	0.566	-0.833	-0.167	-1.232	0.783	0.833	0.500	1.199	-1.882	0.450	0.050	-0.266	0.350
2,3,4,4',5-PeCB(#114)	5.965	5.480	5.780	6.315	5.740	6.085	5.850	6.510	6.820	7.205	6.030	5.930	7.120	6.455		6.910
z score	-0.394	-1.101	-0.664	0.117	-0.722	-0.219	-0.561	0.401	0.853	1.415	-0.299	-0.445	1.291	0.321	5.250	0.984
															#	
2,3',4,4',5,5'-HxCB(#167)		10.250	10.120	13.900	12.200	10.650	10.500	11.500	13.300	12.050	12.300	10.600	12.500	12.400	12.250	12.850
z score	4.646	-0.974	-1.072	1.761	0.487	-0.674	-0.787	-0.037	1.312	0.375	0.562	-0.712	0.712	0.637	0.525	0.974
	#															
2,3,3',4,4',5-HxCB(#156)	31.85	35.00	32.85	32.45	33.35	32.00	29.15	37.55		34.55	35.10	34.75	35.20	35.30	33.15	35.10
z score	-0.531	0.756	-0.123	-0.286	0.082	-0.470	-1.635	1.799	6.438	0.572	0.797	0.654	0.838	0.879	0.000	0.797
									#							
2,3,3',4,4',5'-HxCB(#157)	16.70	15.30	17.00	16.85	16.60	15.85	14.75	16.20	20.00	14.60	16.50	15.20	17.00	16.15	16.10	17.20
z score	0.450	-0.450	0.642	0.546	0.385	-0.096	-0.803	0.128	2.569	-0.899	0.321	-0.514	0.642	0.096	0.064	0.771
2,3,3',4,4',5,5'-HpCB(#189)	26.05	26.30	29.90	30.50	31.40	26.40	26.80	29.95	30.20	28.70	30.15	25.50	29.60	28.40	28.30	30.00
z score	-0.799	-0.710	0.568	0.781	1.100	-0.674	-0.532	0.586	0.674	0.142	0.657	-0.994	0.461	0.035	0.000	0.603
TEQ DL-PCB	6.046	7.148	6.921	7.613	6.556	6.645	6.076	6.149	7.696	7.246	6.859	5.389	7.227	6.589	6.708	7.409
z score	-0.806	0.820	0.487	1.506	-0.053	0.078	-0.761	-0.653	1.629	0.966	0.394	-1.774	0.938	-0.003	0.171	1.206
TEQ DXN + DL-PCB	42.024	42.046	43.915	47.490	47.199	47.755	37.971	39.895	49.462	42.522	44.475	42.114	46.159	45.035	44.842	47.319
z score	-0.719	-0.712	-0.164	0.884	0.799	0.962	-1.907	-1.343	1.462	-0.573	0.000	-0.692	0.494	0.164	0.108	0.834

表-3

第18回ダイオキシン類分析 技能試験 結果 (模擬排水)

定量値単位 : pg/L

分析所番号	51	52	53	54R	55	56	58	59	60	61	62	63	64	65	66	67
PCDD Isomer(異性体)																
2,3,7,8-TeCDD	1.050	1.095	0.908	1.510	1.175	1.110	0.782	1.485	0.987		1.145	1.090	1.265	1.033	1.085	1.075
z score	-0.179	0.224	-1.457	3.944	0.941	0.359	-2.586	3.720	-0.748	1.882	0.672	0.179	1.748	-0.336	0.134	0.045
				#				#								
1,2,3,7,8-PeCDD	5.575	6.070	5.890		6.150	6.905	4.805		5.285		5.575	5.465	5.985	5.125	5.630	5.280
z score	-0.584	0.467	0.085	3.091	0.637	2.241	-2.220	-3.091	-1.200	1.498	-0.584	-0.818	0.287	-1.540	-0.467	-1.211
				#				#								
1,2,3,4,7,8-HxCDD	5.220	6.755	5.465	6.975	5.765	5.725	5.190		5.245		5.615	5.695	5.355	5.015	6.240	4.900
z score	-0.670	2.267	-0.201	2.688	0.373	0.297	-0.727	-3.703	-0.622	3.492	0.086	0.239	-0.411	-1.062	1.282	-1.282
								#		#						
1,2,3,6,7,8-HxCDD	12.100	11.950	12.700	14.050	12.600	11.700	11.400	10.750	11.500		11.800	11.300	11.750	11.500	12.100	12.100
z score	0.491	0.307	1.226	2.882	1.104	0.000	-0.368	-1.165	-0.245	4.721	0.123	-0.491	0.061	-0.245	0.491	0.491
										#						
1,2,3,7,8,9-HxCDD	7.530	10.155	7.715	8.655	9.035	9.350	7.035	6.755	7.320		8.305	7.715	8.845	8.050	8.290	8.350
z score	-0.968	2.420	-0.729	0.484	0.975	1.381	-1.607	-1.969	-1.239	4.673	0.032	-0.729	0.729	-0.297	0.013	0.090
										#						
1,2,3,4,6,7,8-HpCDD	62.40	70.65	63.55	66.85	68.90	72.55	60.45	60.10	63.05		61.90	69.25	63.60	59.40	63.40	61.50
z score	-0.560	1.089	-0.330	0.330	0.739	1.469	-0.949	-1.019	-0.430	1.309	-0.660	0.809	-0.320	-1.159	-0.360	-0.739
OCDD	113.00	123.35	115.00	85.25	114.50	117.50	104.50	99.85	108.00		110.00	121.50	110.50	105.00	115.50	97.65
z score	-0.104	0.970	0.104	-2.983	0.052	0.363	-0.986	-1.468	-0.623	1.193	-0.415	0.778	-0.363	-0.934	0.156	-1.697
PCDF Isomer(異性体)																
2,3,7,8-TeCDF	9.530	10.250	8.685	9.365	9.510	9.775	9.385	7.330	9.795		10.605	9.200	10.140	8.995	9.530	8.485
z score	0.277	1.299	-0.923	0.043	0.248	0.625	0.071	-2.846	0.653	1.654	1.803	-0.192	1.143	-0.483	0.277	-1.207
1,2,3,7,8-PeCDF(単独分離)	14.20		15.95	16.30	16.00	14.85	12.90		15.50		14.55	15.05	16.40	15.20	15.50	14.70
z score	-0.771		0.578	0.848	0.617	-0.270	-1.773		0.231	2.737	-0.501	-0.116	0.925	0.000	0.231	-0.385
1,2,3,7,8-PeCDF(他と重なり)		37.85						34.70								
z score		2.248						0.360								
2,3,4,7,8-PeCDF	30.95	38.25	30.75	35.15	31.60	31.95	30.80	31.20	29.85		31.15	34.30	29.15	29.65	32.20	29.75
z score	-0.164	2.821	-0.245	1.553	0.102	0.245	-0.225	-0.061	-0.613	1.574	-0.082	1.206	-0.899	-0.695	0.347	-0.654
1,2,3,4,7,8-HxCDF(単独分離)	41.15		37.30	37.90	43.10	42.35	35.45		37.45		39.80	45.45	42.75	37.80	39.60	36.80
z score	0.368		-0.812	-0.629	0.966	0.736	-1.380		-0.766	4.277	-0.046	1.686	0.858	-0.659	-0.107	-0.966
										#						
1,2,3,4,7,8-HxCDF(他と重なり)		48.850						37.200								
z score		1.617						-2.413								
1,2,3,6,7,8-HxCDF	39.00	45.15	37.05	44.75	43.60	42.60	34.90	35.55	35.05		36.65	41.85	38.70	37.45	40.45	37.10
z score	-0.016	1.936	-0.635	1.809	1.444	1.127	-1.317	-1.111	-1.270	4.698	-0.762	0.889	-0.111	-0.508	0.444	-0.619
										#						
1,2,3,7,8,9-HxCDF	2.080	2.510	1.950	3.055	2.760	2.215	1.995	2.305	2.005		2.750	2.600	2.540	2.325	2.615	2.350
z score	-0.687	0.407	-1.018	1.794	1.044	-0.344	-0.904	-0.115	-0.878	3.360	1.018	0.636	0.484	-0.064	0.674	0.000
										#						
2,3,4,6,7,8-HxCDF(単独の値)	63.55	66.85	59.65		70.00		59.50	51.70	64.60		55.75	70.05	60.85	56.65	62.50	60.70
z score	0.616	1.584	-0.528		2.507		4.120	-0.572	-2.859	0.924	-1.672	2.522	-0.176	-1.408	0.308	-0.220
						#				#						

表-3

第18回ダイオキシン類分析 技能試験 結果 (模擬排水)

定量値単位 : pg/L

分析所番号	51	52	53	54R	55	56	58	59	60	61	62	63	64	65	66	67
1,2,3,4,6,7,8-HpCDF	206.5	230.5	216.5	190.0	222.5	215.0	178.0	171.0	216.5		202.0	233.0	208.0	194.5	220.5	191.0
z score	-0.440	0.881	0.110	-1.349	0.440	0.028	-2.010	-2.395	0.110	1.404	-0.688	1.019	-0.358	-1.101	0.330	-1.294
1,2,3,4,7,8,9-HpCDF	22.20	20.95	21.45	23.60	24.65	24.50	20.90	18.55	20.65		23.15	25.75	21.65	20.70	23.85	18.80
z score	-0.050	-0.674	-0.425	0.650	1.174	1.099	-0.699	-1.874	-0.824	4.921	0.425	1.724	-0.325	-0.799	0.774	-1.749
OCDF	205.0	197.0	191.5	170.0	193.0	214.5	191.5	157.0	206.0	#	176.5	225.0	188.5	187.0	216.0	193.0
z score	0.620	0.036	-0.365	-1.932	-0.255	1.313	-0.365	-2.880	0.693	2.880	-1.458	2.078	-0.583	-0.693	1.422	-0.255
TEQ Dioxin	37.358	43.340	36.659	42.395	40.175	41.187	34.381	34.377	36.084		36.585	40.066	37.602	35.121	38.149	35.600
z score	-0.141	1.833	-0.372	1.521	0.788	1.122	-1.123	-1.125	-0.562	2.541	-0.396	0.753	-0.061	-0.879	0.120	-0.721
DD Homologue(同族体)																
TeCDDs	139.5	176.0	134.0	179.5	155.5	161.5	107.0	141.0	130.0		147.5	138.0	165.5	146.0	134.0	130.5
z score	-0.262	2.473	-0.674	2.735	0.937	1.386	-2.698	-0.150	-0.974	0.487	0.337	-0.375	1.686	0.225	-0.674	-0.937
PeCDDs	146.0	171.5	148.5	183.5	158.0	184.5	128.5	123.0	142.5		148.0	144.5	151.5	137.0	147.5	140.0
z score	-0.585	1.709	-0.360	2.788	0.495	2.878	-2.158	-2.653	-0.899	0.989	-0.405	-0.719	-0.090	-1.394	-0.450	-1.124
HxCDDs	147.0	152.0	145.0	168.0	155.0	152.0	137.5		138.0		143.5	144.5	149.5	140.5	147.5	150.0
z score	-0.368	0.245	-0.613	2.207	0.613	0.245	-1.533	-3.311	-1.472	4.844	-0.797	-0.674	-0.061	-1.165	-0.307	0.000
HpCDDs	122.5	140.5	126.5	132.0	135.0	147.5	120.5	118.5	132.5	#	120.0	137.5	128.0	117.0	124.5	122.0
z score	-0.744	0.930	-0.372	0.140	0.419	1.582	-0.930	-1.116	0.186	1.954	-0.977	0.651	-0.233	-1.256	-0.558	-0.791
OCDD(再掲)	113.0	123.4	115.0	85.3	114.5	117.5	104.5	99.9	108.0		110.0	121.5	110.5	105.0	115.5	97.7
z score	-0.104	0.970	0.104	-2.983	0.052	0.363	-0.986	-1.468	-0.623	1.193	-0.415	0.778	-0.363	-0.934	0.156	-1.697
Total PCDDs	668.0	763.4	669.0	748.3	718.0	763.0	598.0	605.4	651.0		669.0	686.0	705.0	645.5	669.0	640.2
z score	-0.481	1.879	-0.457	1.505	0.756	1.870	-2.214	-2.032	-0.902	2.278	-0.457	-0.036	0.434	-1.038	-0.457	-1.171
DF Homologue(同族体)																
TeCDFs	470.5	571.0	478.5	529.0	436.0	483.0	392.0	360.5	438.0		476.5	499.5	499.0	468.0	483.5	440.5
z score	-0.181	2.097	0.000	1.145	-0.964	0.102	-1.961	-2.675	-0.918	0.941	-0.045	0.476	0.465	-0.238	0.113	-0.862
PeCDFs	469.0		502.5	506.5	484.5	513.5	414.5	478.5	421.5		438.0	481.5	494.0	472.0	471.0	461.5
z score	-0.358	3.309	1.054	1.223	0.295	1.518	-2.656	0.042	-2.361	3.056	-1.665	0.169	0.696	-0.232	-0.274	-0.674
HxCDFs	433.5	488.5	418.0	463.0	502.5	478.0	406.5	378.5	396.0	#	425.5	484.5	469.0	415.0	434.0	405.0
z score	-0.290	1.305	-0.740	0.566	1.712	1.001	-1.073	-1.886	-1.378	4.772	-0.522	1.189	0.740	-0.827	-0.276	-1.117
HpCDFs	307.0	337.5	318.0	288.0	330.0	323.5	317.5	259.0	316.0	#	299.0	347.5	307.0	288.0	324.0	279.5
z score	-0.324	0.773	0.072	-1.007	0.504	0.270	0.054	-2.050	0.000	2.104	-0.612	1.133	-0.324	-1.007	0.288	-1.313
OCDF(再掲)	205.0	197.0	191.5	170.0	193.0	214.5	191.5	157.0	206.0		176.5	225.0	188.5	187.0	216.0	193.0
z score	0.620	0.036	-0.365	-1.932	-0.255	1.313	-0.365	-2.880	0.693	2.880	-1.458	2.078	-0.583	-0.693	1.422	-0.255
Total PCDFs	1885.0	2150.0	1908.5	1956.5	1946.0	2012.5	1722.0	1633.5	1777.5		1815.5	2038.0	1957.5	1830.0	1928.5	1779.5
z score	-0.202	2.289	0.019	0.470	0.371	0.996	-1.734	-2.566	-1.213	3.591	-0.855	1.236	0.479	-0.719	0.207	-1.194
										#						

表-3

第18回ダイオキシン類分析 技能試験 結果 (模擬排水)

定量値単位 : pg/L

分析所番号	51	52	53	54R	55	56	58	59	60	61	62	63	64	65	66	67
Total Homologues	2553.0	2913.4	2577.5	2704.8	2664.0	2775.5	2320.0	2238.9	2428.5		2484.5	2724.0	2662.5	2475.5	2597.5	2419.7
z score	-0.324	2.302	-0.146	0.782	0.485	1.297	-2.022	-2.614	-1.232	3.429	-0.824	0.922	0.474	-0.889	0.000	-1.296
										#						

DL-PCB																
3,4,4',5-TeCB(#81)	11.750	12.300	10.600	12.850	12.250		9.475	10.075	10.650	13.600	11.100	12.300	11.850	11.250	11.450	11.100
z score	0.253	0.717	-0.717	1.180	0.674	1.391	-1.665	-1.159	-0.674	1.813	-0.295	0.717	0.337	-0.169	0.000	-0.295
3,3',4,4'-TeCB(#77)	62.95	63.00	54.60	71.30	63.95		50.10	47.35	56.25	68.35	60.50	67.60	62.55	60.10	61.95	61.35
z score	0.294	0.303	-1.239	1.826	0.477	7.681	-2.065	-2.569	-0.936	1.285	-0.156	1.147	0.220	-0.229	0.110	0.000
						#										
3,3',4,4',5-PeCB(#126)	60.65	63.20	51.50	69.85	55.90		42.10	59.25	48.45	65.95	61.65	55.15	66.75	57.15	54.80	55.85
z score	0.086	0.486	-1.349	1.529	-0.659	0.988	-2.823	-0.133	-1.827	0.918	0.243	-0.776	1.043	-0.463	-0.831	-0.667
3,3',4,4',5,5'-HxCB(#169)	20.45	20.65	19.00	25.60	19.20		16.80	16.55	17.65	23.45	17.80	20.90	20.65	18.50	20.50	19.60
z score	0.361	0.458	-0.337	2.842	-0.241	1.132	-1.397	-1.518	-0.988	1.807	-0.915	0.578	0.458	-0.578	0.385	-0.048
2',3,4,4',5-PeCB(#123)	4.290	4.925	3.940	4.465	4.330		2.840	3.630	4.245	4.990	4.470	4.530	4.670	4.080	4.805	3.590
z score	-0.040	1.238	-0.745	0.312	0.040	26.154	-2.960	-1.369	-0.131	1.369	0.322	0.443	0.725	-0.463	0.997	-1.450
						#										
2,3',4,4',5-PeCB(#118)	26.65	29.65	21.05	20.95	32.10		16.15	23.40	32.10	29.20	26.40	23.40	25.75	24.20	33.10	19.90
z score	0.514	1.156	-0.685	-0.707	1.681	116.002	-1.734	-0.182	1.681	1.060	0.460	-0.182	0.321	-0.011	1.895	-0.931
						#										
2,3,3',4,4'-PeCB(#105)	32.25	34.40	26.40	31.50	29.70		20.55	29.40	30.55	32.15	28.35	30.80	29.00	27.55	32.35	22.15
z score	1.116	1.832	-0.833	0.866	0.266	73.811	-2.781	0.167	0.550	1.083	-0.183	0.633	0.033	-0.450	1.149	-2.248
						#										
2,3,4,4',5-PeCB(#114)	6.235	7.300	5.180	4.915	7.155		5.010	5.260	5.720	6.740	6.665	6.695	6.125	5.670	6.505	6.000
z score	0.000	1.553	-1.539	-1.925	1.342	35.460	-1.786	-1.422	-0.751	0.736	0.627	0.671	-0.160	-0.824	0.394	-0.343
						#										
2,3',4,4',5,5'-HxCB(#167)	12.300	12.400	10.450	13.850	11.800		7.765	11.000	10.350	15.450	10.950	12.200	13.000	10.800	11.950	9.705
z score	0.562	0.637	-0.824	1.724	0.187	9.480	-2.837	-0.412	-0.899	2.923	-0.450	0.487	1.087	-0.562	0.300	-1.383
						#										
2,3,3',4,4',5-HxCB(#156)	33.50	37.30	29.20	34.00	33.75			28.65	31.85	38.60	30.85	33.05	35.75	31.65	33.00	31.80
z score	0.143	1.696	-1.615	0.347	0.245	8.809	-3.597	-1.840	-0.531	2.228	-0.940	-0.041	1.063	-0.613	-0.061	-0.552
						#	#									
2,3,3',4,4',5'-HxCB(#157)	16.05	18.20	14.50	17.75	16.30			15.10	13.65	17.30	14.60	16.65	17.30	14.60	15.25	15.05
z score	0.032	1.413	-0.964	1.124	0.193	4.175	-3.437	-0.578	-1.510	0.835	-0.899	0.418	0.835	-0.899	-0.482	-0.610
						#	#									
2,3,3',4,4',5,5'-HpCB(#189)	28.25	28.65	25.75	27.50	29.05		23.55	23.75	24.65	33.40	26.90	31.35	28.85	26.20	30.35	27.00
z score	-0.018	0.124	-0.905	-0.284	0.266	1.668	-1.686	-1.615	-1.296	1.810	-0.497	1.083	0.195	-0.745	0.728	-0.461
TEQ DL-PCB	6.693	6.955	5.733	7.769	6.181		4.725	6.433	5.388	7.315	6.713	6.157	7.309	6.284	6.110	6.187
z score	0.150	0.536	-1.267	1.737	-0.606	1.113	-2.754	-0.233	-1.776	1.067	0.179	-0.641	1.059	-0.454	-0.711	-0.598
TEQ DXN + DL-PCB	44.052	50.294	42.392	50.164	46.356	48.533	39.106	40.811	41.472	52.801	43.298	46.224	44.911	41.404	44.259	41.786
z score	-0.124	1.706	-0.611	1.668	0.551	1.190	-1.574	-1.075	-0.881	2.441	-0.345	0.513	0.128	-0.900	-0.063	-0.788

表-3

第18回ダイオキシン類分析 技能試験 結果 (模擬排水)

分析所番号	68
PCDD Isomer(異性体)	
2,3,7,8-TeCDD	1.180
z score	0.986
1,2,3,7,8-PeCDD	5.385
z score	-0.988
1,2,3,4,7,8-HxCDD	5.230
z score	-0.651
1,2,3,6,7,8-HxCDD	11.550
z score	-0.184
1,2,3,7,8,9-HxCDD	8.465
z score	0.239
1,2,3,4,6,7,8-HpCDD	63.85
z score	-0.270
OCDD	114.00
z score	0.000
PCDF Isomer(異性体)	
2,3,7,8-TeCDF	9.470
z score	0.192
1,2,3,7,8-PeCDF(単独分離)	14.60
z score	-0.463
1,2,3,7,8-PeCDF(他と重なり)	
z score	
2,3,4,7,8-PeCDF	30.25
z score	-0.450
1,2,3,4,7,8-HxCDF(単独分離)	37.40
z score	-0.782
1,2,3,4,7,8-HxCDF(他と重なり)	
z score	
1,2,3,6,7,8-HxCDF	36.25
z score	-0.889
1,2,3,7,8,9-HxCDF	2.535
z score	0.471
2,3,4,6,7,8-HxCDF(単独の値)	57.35
z score	-1.202

表-3

第18回ダイオキシン類分析 技能試験 結果（模擬排水）

分析所番号	68
1,2,3,4,6,7,8-HpCDF	190.5
z score	-1.321
1,2,3,4,7,8,9-HpCDF	21.50
z score	-0.400
OCDF	194.5
z score	-0.146
TEQ Dioxin	35.754
z score	-0.670
DD Homologue(同族体)	
TeCDDs	137.0
z score	-0.450
PeCDDs	151.5
z score	-0.090
HxCDDs	151.5
z score	0.184
HpCDDs	129.0
z score	-0.140
OCDD(再掲)	114.0
z score	0.000
Total PCDDs	683.0
z score	-0.110
DF Homologue(同族体)	
TeCDFs	407.0
z score	-1.621
PeCDFs	474.5
z score	-0.126
HxCDFs	399.5
z score	-1.276
HpCDFs	283.5
z score	-1.169
OCDF(再掲)	194.5
z score	-0.146
Total PCDFs	1759.0
z score	-1.387

表-3

第18回ダイオキシン類分析 技能試験 結果 (模擬排水)

分析所番号	68
Total Homologues	2442.0
z score	-1.133

DL-PCB	
3,4,4',5-TeCB(#81)	9.685
z score	-1.488
3,3',4,4'-TeCB(#77)	54.45
z score	-1.266
3,3',4,4',5-PeCB(#126)	56.35
z score	-0.588
3,3',4,4',5,5'-HxCB(#169)	19.40
z score	-0.145
2',3,4,4',5-PeCB(#123)	4.200
z score	-0.221
2,3',4,4',5-PeCB(#118)	24.95
z score	0.150
2,3,3',4,4'-PeCB(#105)	27.80
z score	-0.366
2,3,4,4',5-PeCB(#114)	5.940
z score	-0.430
2,3',4,4',5,5'-HxCB(#167)	10.400
z score	-0.862
2,3,3',4,4',5-HxCB(#156)	31.55
z score	-0.654
2,3,3',4,4',5'-HxCB(#157)	14.55
z score	-0.931
2,3,3',4,4',5,5'-HpCB(#189)	24.80
z score	-1.242
TEQ DL-PCB	6.230
z score	-0.534
TEQ DXN + DL-PCB	41.984
z score	-0.731

表-4 第18回ダイオキシン類分析 技能試験 結果（模擬排水） 統計計算結果

	TEF	TEQ寄与率%	N	z >3	average	median	U95%	SD	NIQR	U95%*CV%	CV%clas	CV%rob
PCDD Isomer(異性体)												
2,3,7,8-TeCDD	1	2.4	62	3	1.069	1.070	0.038	0.150	0.114	4	14	11
				5%								
1,2,3,7,8-PeCDD	1	13.1	60	2	5.770	5.830	0.131	0.507	0.460	2	9	8
				3%								
1,2,3,4,7,8-HxCDD	0.1	1.2	61	2	5.514	5.465	0.136	0.531	0.493	2	10	9
				3%								
1,2,3,6,7,8-HxCDD	0.1	2.6	61	4	11.71	11.70	0.210	0.82	0.67	2	7	6
				7%								
1,2,3,7,8,9-HxCDD	0.1	1.8	62	2	8.28	8.12	0.193	0.76	0.68	2	9	8
				3%								
1,2,3,4,6,7,8-HpCDD	0.01	1.5	61	3	64.9	64.8	1.074	4.2	4.4	2	6	7
				5%								
OCDD	0.0003	0.077	60	4	113.3	113.5	2.506	9.7	9.0	2	9	8
				7%								
PCDF Isomer(異性体)												
2,3,7,8-TeCDF	0.1	2.09	62	1	9.275	9.293	0.209	0.825	0.688	2	9	7
				2%								
1,2,3,7,8-PeCDF(単独分離)	0.03	1.0	45	3	15.17	15.20	0.383	1.27	1.11	3	8	7
				7%								
1,2,3,7,8-PeCDF(他と重なり)	0.03	2.3	15	1	33.56	33.95	0.85	2.77	1.65	3	8	5
				7%								
2,3,4,7,8-PeCDF	0.3	21.1	62	2	31.06	31.18	0.672	2.64	2.35	2	9	8
				3%								
1,2,3,4,7,8-HxCDF(単独分離)	0.1	9.0	47	2	39.88	39.80	0.862	2.94	3.32	2	7	8
				4%								
1,2,3,4,7,8-HxCDF(他と重なり)	0.1	9.9	15	1	43.46	43.85	1.40	2.94	2.71	3	7	6
				7%								
1,2,3,6,7,8-HxCDF	0.1	8.8	62	2	39.06	39.03	0.782	3.08	3.02	2	8	8
				3%								
1,2,3,7,8,9-HxCDF	0.1	0.5	61	2	2.31	2.31	0.098	0.38	0.37	4	17	16
				3%								
2,3,4,6,7,8-HxCDF(単独の値)	0.1	13.8	55	5	61.3	61.4	1.224	4.5	3.0	2	7	5
				9%								

表-4 第18回ダイオキシン類分析 技能試験 結果（模擬排水） 統計計算結果

	TEF	TEQ寄与率%	N	z >3	average	median	U95%	SD	NIQR	U95%*CV%	CV%clas	CV%rob
1,2,3,4,6,7,8-HpCDF	0.01	4.7	61	1	210.6	210.0	5.001	19.5	17.4	2	9	8
				2%								
1,2,3,4,7,8,9-HpCDF	0.01	0.5	61	4	22.1	22.3	0.493	1.9	1.9	2	9	9
				7%								
OCDF	0.0003	0.13	60	4	195.4	194.8	3.744	14.5	11.9	2	7	6
				7%								
TEQ Dioxin		84.8	62	2	37.64	37.61	0.652	2.57	2.87	2	7	8
				3%								
DD Homologue(同族体)												
TeCDDs			62	0	142.00	142.25	2.78	14.69	10.93	2	10	8
				0%								
PeCDDs			62	0	151.11	152.25	2.68	12.03	10.56	2	8	7
				0%								
HxCDDs			60	5	149.1	149.5	2.1	9.4	8.2	1	6	6
				8%								
HpCDDs			62	2	130.1	130.0	2.4	9.1	9.3	2	7	7
				3%								
OCDD(再掲)			60	4	113.3	113.5	2.3	9.7	9.0	2	9	8
				7%								
Total PCDDs			62	2	686.9	686.3	9.2	46.3	36.4	1	7	5
				3%								
DF Homologue(同族体)												
TeCDFs			62	0	477.1	476.3	10.3	47.7	40.7	2	10	9
				0%								
PeCDFs			59	6	476.3	476.5	6.1	28.4	23.4	1	6	5
				10%								
HxCDFs			62	2	439.1	440.5	8.8	30.7	34.8	2	7	8
				3%								
HpCDFs			62	1	314.4	315.5	6.3	28.8	24.7	2	9	8
				2%								
OCDF(再掲)			60	4	195.4	194.8	3.1	14.5	11.9	2	7	6
				7%								
Total PCDFs			62	3	1901	1904	21	118	83	1	6	4
				5%								

表-4 第18回ダイオキシン類分析 技能試験 結果（模擬排水） 統計計算結果

	TEF	TEQ寄与率%	N	z >3	average	median	U95%	SD	NIQR	U95%*CV%	CV%clas	CV%rob
Total Homologues			62	3	2588	2592	31	158	124	1	6	5
				5%								

DL-PCB												
3,4,4',5-TeCB(#81)	0.0003	0.00774	64	0	11.422	11.450	0.262	1.164	1.047	2	10	9
				0%								
3,3',4,4'-TeCB(#77)	0.0001	0.0138	64	1	60.94	61.08	1.33	5.89	5.32	2	10	9
				2%								
3,3',4,4',5-PeCB(#126)	0.1	13.5	64	0	60.01	60.03	1.60	6.50	6.38	3	11	11
				0%								
3,3',4,4',5,5'-HxCB(#169)	0.03	1.33	63	1	19.88	19.60	0.50	1.99	2.00	3	10	10
				2%								
2',3,4,4',5-PeCB(#123)	0.00003	0.00029	62	3	4.243	4.295	0.121	0.521	0.478	2	7	6
				5%								
2,3',4,4',5-PeCB(#118)	0.00003	0.0016	62	3	25.05	24.23	1.13	4.39	4.46	5	18	18
				5%								
2,3,3',4,4'-PeCB(#105)	0.00003	0.0019	63	2	28.17	28.45	0.74	3.05	2.95	3	11	10
				3%								
2,3,4,4',5-PeCB(#114)	0.00003	0.0004	63	2	6.180	6.155	0.164	0.713	0.650	3	12	11
				3%								
2,3',4,4',5,5'-HxCB(#167)	0.00003	0.00078	63	2	11.526	11.500	0.322	1.417	1.279	3	12	11
				3%								
2,3,3',4,4',5-HxCB(#156)	0.00003	0.0022	61	4	33.42	33.15	0.62	2.74	2.41	2	8	7
				7%								
2,3,3',4,4',5'-HxCB(#157)	0.00003	0.0011	63	2	15.901	16.000	0.378	1.591	1.501	2	10	9
				3%								
2,3,3',4,4',5,5'-HpCB(#189)	0.00003	0.0019	64	0	28.09	28.28	0.70	2.62	2.79	2	9	10
				0%								
TEQ DL-PCB		14.9	64	0	6.615	6.591	0.167	0.694	0.667	3	10	10
				0%								
TEQ DXN + DL-PCB		100.0	64	2	44.52	44.37	0.82	3.45	3.26	2	8	7
				3%								

	認証値		不確かさ	N	SD	CV%clas	TEQ		TEQ不確かさ
PCDD Isomer(異性体)									
2,3,7,8-TeCDD	1.069	±	0.038	62	0.150	14.0	1.069	±	0.038
1,2,3,7,8-PeCDD	5.77	±	0.13	60	0.51	8.8	5.77	±	0.13
1,2,3,4,7,8-HxCDD	5.51	±	0.14	61	0.53	9.6	0.551	±	0.014
1,2,3,6,7,8-HxCDD	11.71	±	0.21	61	0.82	7.0	1.171	±	0.021
1,2,3,7,8,9-HxCDD	8.28	±	0.19	62	0.76	9.2	0.828	±	0.019
1,2,3,4,6,7,8-HpCDD	64.9	±	1.1	61	4.2	6.5	0.649	±	0.011
OCDD	113.3	±	2.5	60	9.7	8.6	0.03398	±	0.00075
PCDF Isomer(異性体)									
2,3,7,8-TeCDF	9.28	±	0.21	62	0.82	8.9	0.928	±	0.021
1,2,3,7,8-PeCDF(単独分離)	15.17	±	0.38	45	1.27	8.4	0.455	±	0.011
1,2,3,7,8-PeCDF(他と重なり)									
2,3,4,7,8-PeCDF	31.06	±	0.67	62	2.64	8.5	9.32	±	0.20
1,2,3,4,7,8-HxCDF(単独分離)	39.88	±	0.86	47	2.94	7.4	3.988	±	0.086
1,2,3,4,7,8-HxCDF(他と重なり)									
1,2,3,6,7,8-HxCDF	39.06	±	0.78	62	3.08	7.9	3.906	±	0.078
1,2,3,7,8,9-HxCDF	2.31	±	0.10	61	0.38	16.5	0.231	±	0.010
2,3,4,6,7,8-HxCDF(単独の値)	61.3	±	1.2	55	4.5	7.4	6.13	±	0.12

	認証値		不確かさ	N	SD	CV%clas	TEQ		TEQ不確かさ
Total Homologues	2588	±	31	62	158	6.1			
DL-PCB									
3,4,4',5-TeCB(#81)	11.42	±	0.26	64	1.16	10.2	0.003427	±	0.000079
3,3',4,4'-TeCB(#77)	60.9	±	1.3	64	5.9	9.7	0.00609	±	0.00013
3,3',4,4',5-PeCB(#126)	60.0	±	1.6	64	6.5	10.8	6.00	±	0.16
3,3',4,4',5,5'-HxCB(#169)	19.88	±	0.50	63	1.99	10.0	0.596	±	0.015
2',3,4,4',5-PeCB(#123)	4.24	±	0.12	62	0.52	6.5	0.0001273	±	0.0000036
2,3',4,4',5-PeCB(#118)	25.1	±	1.1	62	4.4	17.5	0.000752	±	0.000034
2,3,3',4,4'-PeCB(#105)	28.17	±	0.74	63	3.05	10.8	0.000845	±	0.000022
2,3,4,4',5-PeCB(#114)	6.18	±	0.16	63	0.71	11.5	0.0001854	±	0.0000049
2,3',4,4',5,5'-HxCB(#167)	11.53	±	0.32	63	1.42	12.3	0.000346	±	0.000010
2,3,3',4,4',5-HxCB(#156)	33.42	±	0.62	61	2.74	8.2	0.001003	±	0.000019
2,3,3',4,4',5'-HxCB(#157)	15.90	±	0.38	63	1.59	10.0	0.000477	±	0.000011
2,3,3',4,4',5,5'-HpCB(#189)	28.09	±	0.70	64	2.62	9.3	0.000843	±	0.000021
TEQ DL-PCB	6.62	±	0.17	64	0.69	10.5	6.61	±	0.17
TEQ DXN + DL-PCB	44.52	±	0.82	64	3.45	7.7	44.03	±	0.82