



Marchwood Scientific Services

Unit 4G Central Crescent,
Marchwood Industrial Park,
Marchwood,
Southampton, Hants,
SO40 4BJ

Tel: 02380-669126
Fax: 02380-669127

Name of Client : Shanks plc
Address : New Inn, Pontypool, Gwent, S Wales

Test Certificate No: 105-2297

ANALYSIS OF PCDDs and PCDFs

Job Reference: Shanks - Pontypool
Sample Identifier : BH5
Sample No: 105-2297
Order No:

Date of Receipt : 05/10/05
Date of Analysis : 17/03/06
Date of Report : 20/03/06
No of Samples in Batch : 19
Sample Condition : normal

Instrument : Micromass Ultima NT
GC Column : DB5
Calibration File : 170306

Test Method : 1122
Blank :
Sample Size : 0.5

expressed as ng / l

Congener	Conc	TEFs	TEQ ¹	TEQ ²	DL	Rec %	Error %
2378-TCDF	*	0.100	0.0001	0.0000	0.0010	81	
12378-PCDF	*	0.050	0.0001	0.0000	0.0010	72	
23478-PCDF	*	0.500	0.0005	0.0000	0.0010	70	
123478-HxCDF	*	0.100	0.0001	0.0000	0.0010	62	
123678-HxCDF	*	0.100	0.0001	0.0000	0.0010	60	
234678-HxCDF	*	0.100	0.0001	0.0000	0.0010	64	
123789-HxCDF	*	0.100	0.0001	0.0000	0.0010	68	
1234678-HpCDF	*	0.010	0.0000	0.0000	0.0010	76	
1234789-HpCDF	*	0.010	0.0000	0.0000	0.0010	77	
OCDF	*	0.001	0.0000	0.0000	0.0010		
2378-TCDD	*	1.000	0.0010	0.0000	0.0010	76	
12378-PCDD	*	0.500	0.0005	0.0000	0.0010	95	
123478-HxCDD	*	0.100	0.0001	0.0000	0.0010	62	
123678-HxCDD	*	0.100	0.0001	0.0000	0.0010	62	
123789-HxCDD	*	0.100	0.0001	0.0000	0.0010		
1234678-HpCDD	*	0.010	0.0000	0.0000	0.0010	88	
OCDD	*	0.001	0.0000	0.0000	0.0010	93	
TEQ (Nato)			0.0029	0.0000			10

* Isomer Not detected
TEQ Toxic Equivalent Value
TEF Toxic Equivalent Factor
Conc Concentration
DL Detection Value

TEQ¹ Concentration of Non Detected
Congeners at Detection Limit
TEQ² Concentration of Non Detected
Congeners at Zero

Name of Analyst : K Pettit
Position : Technical Manager

Signature of Analyst :





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Name of Client : Shanks plc
Address : New Inn, Pontypool, Gwent, S Wales

Test Certificate No: 105-2295

ANALYSIS OF PCDDs and PCDFs

Job Reference: Shanks - Pontypool
Sample Identifier : BH11
Sample No: 105-2295
Order No:

Date of Receipt : 05/10/05
Date of Analysis : 17/03/06
Date of Report : 20/03/06
No of Samples in Batch : 19
Sample Condition : normal

Instrument : Micromass Ultima NT
GC Column : DB5
Calibration File : 170306

Test Method : 1122
Blank :
Sample Size : 0.5

expressed as ng / l

Congener	Conc	TEFs	TEQ ¹	TEQ ²	DL	Rec %	Error %
2378-TCDF	*	0.100	0.0001	0.0000	0.0010	81	
12378-PCDF	*	0.050	0.0001	0.0000	0.0010	84	
23478-PCDF	*	0.500	0.0005	0.0000	0.0010	70	
123478-HxCDF	*	0.100	0.0001	0.0000	0.0010	63	
123678-HxCDF	*	0.100	0.0001	0.0000	0.0010	63	
234678-HxCDF	*	0.100	0.0001	0.0000	0.0010	66	
123789-HxCDF	*	0.100	0.0001	0.0000	0.0010	71	
1234678-HpCDF	*	0.010	0.0000	0.0000	0.0010	77	
1234789-HpCDF	*	0.010	0.0000	0.0000	0.0010	77	
OCDF	*	0.001	0.0000	0.0000	0.0010		
2378-TCDD	*	1.000	0.0010	0.0000	0.0010	72	
12378-PCDD	*	0.500	0.0005	0.0000	0.0010	92	
123478-HxCDD	*	0.100	0.0001	0.0000	0.0010	62	
123678-HxCDD	*	0.100	0.0001	0.0000	0.0010	60	
123789-HxCDD	*	0.100	0.0001	0.0000	0.0010		
1234678-HpCDD	*	0.010	0.0000	0.0000	0.0010	89	
OCDD	*	0.001	0.0000	0.0000	0.0010	95	
TEQ (Nato)			0.0029	0.0000			10

* Isomer Not detected
TEQ Toxic Equivalent Value
TEF Toxic Equivalent Factor
Conc Concentration
DL Detection Value

TEQ¹ Concentration of Non Detected
Congeners at Detection Limit
TEQ² Concentration of Non Detected
Congeners at Zero

Name of Analyst : K Pettit
Position : Technical Manager

Signature of Analyst :





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Name of Client : Shanks plc
Address : New Inn, Pontypool, Gwent, S Wales

Test Certificate No: 105-2299

ANALYSIS OF PCDDs and PCDFs

Job Reference: Shanks - Pontypool
Sample Identifier : BH17
Sample No: 105-2299
Order No:

Date of Receipt : 05/10/05
Date of Analysis : 17/03/06
Date of Report : 20/03/06
No of Samples in Batch : 19
Sample Condition : normal

Instrument : Micromass Ultima NT
GC Column : DB5
Calibration File : 170306

Test Method : 1122
Blank :
Sample Size : 0.5

expressed as ng / l

Congener	Conc	TEFs	TEQ ¹	TEQ ²	DL	Rec %	Error %
2378-TCDF	*	0.100	0.0001	0.0000	0.0010	83	
12378-PCDF	*	0.050	0.0001	0.0000	0.0010	80	
23478-PCDF	*	0.500	0.0005	0.0000	0.0010	72	
123478-HxCDF	*	0.100	0.0001	0.0000	0.0010	60	
123678-HxCDF	*	0.100	0.0001	0.0000	0.0010	60	
234678-HxCDF	*	0.100	0.0001	0.0000	0.0010	67	
123789-HxCDF	*	0.100	0.0001	0.0000	0.0010	72	
1234678-HpCDF	*	0.010	0.0000	0.0000	0.0010	80	
1234789-HpCDF	*	0.010	0.0000	0.0000	0.0010	81	
OCDF	*	0.001	0.0000	0.0000	0.0010		
2378-TCDD	*	1.000	0.0010	0.0000	0.0010	82	
12378-PCDD	*	0.500	0.0005	0.0000	0.0010	93	
123478-HxCDD	*	0.100	0.0001	0.0000	0.0010	71	
123678-HxCDD	*	0.100	0.0001	0.0000	0.0010	59	
123789-HxCDD	*	0.100	0.0001	0.0000	0.0010		
1234678-HpCDD	*	0.010	0.0000	0.0000	0.0010	92	
OCDD	*	0.001	0.0000	0.0000	0.0010	99	
TEQ (Nato)			0.0029	0.0000			10

* Isomer Not detected
TEQ Toxic Equivalent Value
TEF Toxic Equivalent Factor
Conc Concentration
DL Detection Value

TEQ¹ Concentration of Non Detected
Congeners at Detection Limit
TEQ² Concentration of Non Detected
Congeners at Zero

Name of Analyst : K Pettit
Position : Technical Manager

Signature of Analyst :





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Name of Client : Shanks plc
Address : New Inn, Pontypool, Gwent, S Wales

Test Certificate No: 105-2294

ANALYSIS OF PCDDs and PCDFs

Job Reference: Shanks - Pontypool
Sample Identifier : BH23
Sample No: 105-2294
Order No:

Date of Receipt : 05/10/05
Date of Analysis : 17/03/06
Date of Report : 20/03/06
No of Samples in Batch : 19
Sample Condition : normal

Instrument : Micromass Ultima NT
GC Column : DB5
Calibration File : 170306

Test Method : 1122
Blank :
Sample Size : 0.5


expressed as ng / l

Congener	Conc	TEFs	TEQ ¹	TEQ ²	DL	Rec %	Error %
2378-TCDF	*	0.100	0.0001	0.0000	0.0010	84	
12378-PCDF	*	0.050	0.0001	0.0000	0.0010	80	
23478-PCDF	*	0.500	0.0005	0.0000	0.0010	77	
123478-HxCDF	*	0.100	0.0001	0.0000	0.0010	66	
123678-HxCDF	*	0.100	0.0001	0.0000	0.0010	64	
234678-HxCDF	*	0.100	0.0001	0.0000	0.0010	70	
123789-HxCDF	*	0.100	0.0001	0.0000	0.0010	74	
1234678-HpCDF	*	0.010	0.0000	0.0000	0.0010	83	
1234789-HpCDF	*	0.010	0.0000	0.0000	0.0010	87	
OCDF	*	0.001	0.0000	0.0000	0.0010		
2378-TCDD	*	1.000	0.0010	0.0000	0.0010	73	
12378-PCDD	*	0.500	0.0005	0.0000	0.0010	104	
123478-HxCDD	*	0.100	0.0001	0.0000	0.0010	66	
123678-HxCDD	*	0.100	0.0001	0.0000	0.0010	67	
123789-HxCDD	*	0.100	0.0001	0.0000	0.0010		
1234678-HpCDD	*	0.010	0.0000	0.0000	0.0010	99	
OCDD	0.0002	0.001	0.0000	0.0000	0.0010	108	
TEQ (Nato)			0.0029	0.0000			10

* Isomer Not detected
TEQ Toxic Equivalent Value
TEF Toxic Equivalent Factor
Conc Concentration
DL Detection Value

TEQ¹ Concentration of Non Detected
Congeners at Detection Limit
TEQ² Concentration of Non Detected
Congeners at Zero

Name of Analyst : K Pettit
Position : Technical Manager

Signature of Analyst : 





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Name of Client : Shanks plc
Address : New Inn, Pontypool, Gwent, S Wales

Test Certificate No: 105-2289

ANALYSIS OF PCDDs and PCDFs

Job Reference: Shanks - Pontypool
Sample Identifier : BH27
Sample No: 105-2289
Order No:

Date of Receipt : 05/10/05
Date of Analysis : 17/03/06
Date of Report : 20/03/06
No of Samples in Batch : 19
Sample Condition : normal

Instrument : Micromass Ultima NT
GC Column : DB5
Calibration File : 170306

Test Method : 1122
Blank :
Sample Size : 0.5


expressed as ng / l

Congener	Conc	TEFs	TEQ ¹	TEQ ²	DL	Rec %	Error %
2378-TCDF	*	0.100	0.0002	0.0000	0.0020	86	
12378-PCDF	*	0.050	0.0001	0.0000	0.0020	62	
23478-PCDF	*	0.500	0.0010	0.0000	0.0020	66	
123478-HxCDF	*	0.100	0.0002	0.0000	0.0020	59	
123678-HxCDF	*	0.100	0.0002	0.0000	0.0020	59	
234678-HxCDF	*	0.100	0.0002	0.0000	0.0020	72	
123789-HxCDF	*	0.100	0.0002	0.0000	0.0020	83	
1234678-HpCDF	*	0.010	0.0000	0.0000	0.0020	92	
1234789-HpCDF	*	0.010	0.0000	0.0000	0.0020	98	
OCDF	*	0.001	0.0000	0.0000	0.0020		
2378-TCDD	*	1.000	0.0020	0.0000	0.0020	62	
12378-PCDD	*	0.500	0.0010	0.0000	0.0020	101	
123478-HxCDD	*	0.100	0.0002	0.0000	0.0020	96	
123678-HxCDD	*	0.100	0.0002	0.0000	0.0020	56	
123789-HxCDD	*	0.100	0.0002	0.0000	0.0020		
1234678-HpCDD	*	0.010	0.0000	0.0000	0.0020	109	
OCDD	*	0.001	0.0000	0.0000	0.0020	125	
TEQ (Nato)			0.0058	0.0000			10

* Isomer Not detected
TEQ Toxic Equivalent Value
TEF Toxic Equivalent Factor
Conc Concentration
DL Detection Value

TEQ¹ Concentration of Non Detected
Congeners at Detection Limit
TEQ² Concentration of Non Detected
Congeners at Zero

Name of Analyst : K Pettit
Position : Technical Manager

Signature of Analyst : 





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Name of Client : Shanks plc
Address : New Inn, Pontypool, Gwent, S Wales

Test Certificate No: 105-2291

ANALYSIS OF PCDDs and PCDFs

Job Reference: Shanks - Pontypool
Sample Identifier : BH28
Sample No: 105-2291
Order No:

Date of Receipt : 05/10/05
Date of Analysis : 17/03/06
Date of Report : 20/03/06
No of Samples in Batch : 19
Sample Condition : normal

Instrument : Micromass Ultima NT
GC Column : DB5
Calibration File : 170306

Test Method : 1122
Blank :
Sample Size : 0.5

expressed as ng / l

Congener	Conc	TEFs	TEQ ¹	TEQ ²	DL	Rec %	Error %
2378-TCDF	*	0.100	0.0001	0.0000	0.0010	86	
12378-PCDF	*	0.050	0.0001	0.0000	0.0010	80	
23478-PCDF	*	0.500	0.0005	0.0000	0.0010	71	
123478-HxCDF	*	0.100	0.0001	0.0000	0.0010	65	
123678-HxCDF	*	0.100	0.0001	0.0000	0.0010	63	
234678-HxCDF	*	0.100	0.0001	0.0000	0.0010	67	
123789-HxCDF	*	0.100	0.0001	0.0000	0.0010	72	
1234678-HpCDF	*	0.010	0.0000	0.0000	0.0010	81	
1234789-HpCDF	*	0.010	0.0000	0.0000	0.0010	82	
OCDF	*	0.001	0.0000	0.0000	0.0010		
2378-TCDD	*	1.000	0.0010	0.0000	0.0010	65	
12378-PCDD	*	0.500	0.0005	0.0000	0.0010	108	
123478-HxCDD	*	0.100	0.0001	0.0000	0.0010	68	
123678-HxCDD	*	0.100	0.0001	0.0000	0.0010	64	
123789-HxCDD	*	0.100	0.0001	0.0000	0.0010		
1234678-HpCDD	*	0.010	0.0000	0.0000	0.0010	97	
OCDD	*	0.001	0.0000	0.0000	0.0010	103	
TEQ (Nato)			0.0029	0.0000			10

* Isomer Not detected
TEQ Toxic Equivalent Value
TEF Toxic Equivalent Factor
Conc Concentration
DL Detection Value

TEQ¹ Concentration of Non Detected
Congeners at Detection Limit
TEQ² Concentration of Non Detected
Congeners at Zero

Name of Analyst : K Pettit
Position : Technical Manager

Signature of Analyst :





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Name of Client : Shanks plc
Address : New Inn, Pontypool, Gwent, S Wales

Test Certificate No: 105-2296

ANALYSIS OF PCDDs and PCDFs

Job Reference: Shanks - Pontypool
Sample Identifier : BH30
Sample No: 105-2296
Order No:

Date of Receipt : 05/10/05
Date of Analysis : 17/03/06
Date of Report : 20/03/06
No of Samples in Batch : 19
Sample Condition : normal

Instrument : Micromass Ultima NT
GC Column : DB5
Calibration File : 170306

Test Method : 1122

Blank :

Sample Size : 0.5

expressed as ng / l

Congener	Conc	TEFs	TEQ ¹	TEQ ²	DL	Rec %	Error %
2378-TCDF	*	0.100	0.0001	0.0000	0.0010	86	
12378-PCDF	*	0.050	0.0001	0.0000	0.0010	80	
23478-PCDF	*	0.500	0.0005	0.0000	0.0010	70	
123478-HxCDF	*	0.100	0.0001	0.0000	0.0010	67	
123678-HxCDF	*	0.100	0.0001	0.0000	0.0010	67	
234678-HxCDF	*	0.100	0.0001	0.0000	0.0010	69	
123789-HxCDF	*	0.100	0.0001	0.0000	0.0010	73	
1234678-HpCDF	*	0.010	0.0000	0.0000	0.0010	81	
1234789-HpCDF	*	0.010	0.0000	0.0000	0.0010	81	
OCDF	*	0.001	0.0000	0.0000	0.0010		
2378-TCDD	*	1.000	0.0010	0.0000	0.0010	73	
12378-PCDD	*	0.500	0.0005	0.0000	0.0010	102	
123478-HxCDD	*	0.100	0.0001	0.0000	0.0010	68	
123678-HxCDD	*	0.100	0.0001	0.0000	0.0010	68	
123789-HxCDD	*	0.100	0.0001	0.0000	0.0010		
1234678-HpCDD	*	0.010	0.0000	0.0000	0.0010	92	
OCDD	0.0000	0.001	0.0000	0.0000	0.0010	98	
TEQ (Nato)			0.0029	0.0000			10

* Isomer Not detected
TEQ Toxic Equivalent Value
TEF Toxic Equivalent Factor
Conc Concentration
DL Detection Value

TEQ¹ Concentration of Non Detected
Congeners at Detection Limit
TEQ² Concentration of Non Detected
Congeners at Zero

Name of Analyst : K Pettit
Position : Technical Manager

Signature of Analyst : 





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Name of Client : Shanks plc
Address : New Inn, Pontypool, Gwent, S Wales

Test Certificate No: 105-2293

ANALYSIS OF PCDDs and PCDFs

Job Reference: Shanks - Pontypool
Sample Identifier : BH31
Sample No: 105-2293
Order No:

Date of Receipt : 05/10/05
Date of Analysis : 17/03/06
Date of Report : 20/03/06
No of Samples in Batch : 19
Sample Condition : normal

Instrument : Micromass Ultima NT
GC Column : DB5
Calibration File : 170306

Test Method : 1122
Blank :
Sample Size : 0.5

expressed as ng / l

Congener	Conc	TEFs	TEQ ¹	TEQ ²	DL	Rec %	Error %
2378-TCDF	*	0.100	0.0001	0.0000	0.0010	75	
12378-PCDF	*	0.050	0.0001	0.0000	0.0010	70	
23478-PCDF	*	0.500	0.0005	0.0000	0.0010	73	
123478-HxCDF	*	0.100	0.0001	0.0000	0.0010	56	
123678-HxCDF	*	0.100	0.0001	0.0000	0.0010	56	
234678-HxCDF	*	0.100	0.0001	0.0000	0.0010	62	
123789-HxCDF	*	0.100	0.0001	0.0000	0.0010	66	
1234678-HpCDF	*	0.010	0.0000	0.0000	0.0010	75	
1234789-HpCDF	*	0.010	0.0000	0.0000	0.0010	79	
OCDF	*	0.001	0.0000	0.0000	0.0010		
2378-TCDD	*	1.000	0.0010	0.0000	0.0010	74	
12378-PCDD	*	0.500	0.0005	0.0000	0.0010	92	
123478-HxCDD	*	0.100	0.0001	0.0000	0.0010	56	
123678-HxCDD	*	0.100	0.0001	0.0000	0.0010	57	
123789-HxCDD	*	0.100	0.0001	0.0000	0.0010		
1234678-HpCDD	*	0.010	0.0000	0.0000	0.0010	89	
OCDD	*	0.001	0.0000	0.0000	0.0010	101	
TEQ (Nato)			0.0029	0.0000			10

* Isomer Not detected
TEQ Toxic Equivalent Value
TEF Toxic Equivalent Factor
Conc Concentration
DL Detection Value

TEQ¹ Concentration of Non Detected
Congeners at Detection Limit
TEQ² Concentration of Non Detected
Congeners at Zero

Name of Analyst : K Pettit
Position : Technical Manager

Signature of Analyst : 





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Name of Client : Shanks plc
Address : New Inn, Pontypool, Gwent, S Wales

Test Certificate No: 105-2290

ANALYSIS OF PCDDs and PCDFs

Job Reference: Shanks - Pontypool
Sample Identifier : BH40
Sample No: 105-2290
Order No:

Date of Receipt : 05/10/05
Date of Analysis : 17/03/06
Date of Report : 20/03/06
No of Samples in Batch : 19
Sample Condition : normal

Instrument : Micromass Ultima NT
GC Column : DB5
Calibration File : 170306

Test Method : 1122
Blank :
Sample Size : 0.5

expressed as ng / l

Congener	Conc	TEFs	TEQ ¹	TEQ ²	DL	Rec %	Error %
2378-TCDF	*	0.100	0.0001	0.0000	0.0010	80	
12378-PCDF	*	0.050	0.0001	0.0000	0.0010	74	
23478-PCDF	*	0.500	0.0005	0.0000	0.0010	70	
123478-HxCDF	*	0.100	0.0001	0.0000	0.0010	62	
123678-HxCDF	*	0.100	0.0001	0.0000	0.0010	62	
234678-HxCDF	*	0.100	0.0001	0.0000	0.0010	65	
123789-HxCDF	*	0.100	0.0001	0.0000	0.0010	70	
1234678-HpCDF	*	0.010	0.0000	0.0000	0.0010	78	
1234789-HpCDF	*	0.010	0.0000	0.0000	0.0010	82	
OCDF	*	0.001	0.0000	0.0000	0.0010		
2378-TCDD	*	1.000	0.0010	0.0000	0.0010	69	
12378-PCDD	*	0.500	0.0005	0.0000	0.0010	95	
123478-HxCDD	*	0.100	0.0001	0.0000	0.0010	64	
123678-HxCDD	*	0.100	0.0001	0.0000	0.0010	64	
123789-HxCDD	*	0.100	0.0001	0.0000	0.0010		
1234678-HpCDD	*	0.010	0.0000	0.0000	0.0010	94	
OCDD	*	0.001	0.0000	0.0000	0.0010	106	
TEQ (Nato)			0.0029	0.0000			10

* Isomer Not detected
TEQ Toxic Equivalent Value
TEF Toxic Equivalent Factor
Conc Concentration
DL Detection Value

TEQ¹ Concentration of Non Detected
Congeners at Detection Limit
TEQ² Concentration of Non Detected
Congeners at Zero

Name of Analyst : K Pettit
Position : Technical Manager

Signature of Analyst : 





Marchwood Scientific Services

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Name of Client : Shanks plc
Address : New Inn, Pontypool, Gwent, S Wales

Test Certificate No: 105-2292

ANALYSIS OF PCDDs and PCDFs

Job Reference: Shanks - Pontypool
Sample Identifier : BH46
Sample No: 105-2292
Order No:

Date of Receipt : 05/10/05
Date of Analysis : 17/03/06
Date of Report : 20/03/06
No of Samples in Batch : 19
Sample Condition : normal

Instrument : Micromass Ultima NT
GC Column : DB5
Calibration File : 170306

Test Method : 1122
Blank :
Sample Size : 0.5


expressed as ng / l

Congener	Conc	TEFs	TEQ ¹	TEQ ²	DL	Rec %	Error %
2378-TCDF	*	0.100	0.0001	0.0000	0.0010	83	
12378-PCDF	*	0.050	0.0001	0.0000	0.0010	80	
23478-PCDF	*	0.500	0.0005	0.0000	0.0010	77	
123478-HxCDF	*	0.100	0.0001	0.0000	0.0010	55	
123678-HxCDF	*	0.100	0.0001	0.0000	0.0010	57	
234678-HxCDF	*	0.100	0.0001	0.0000	0.0010	68	
123789-HxCDF	*	0.100	0.0001	0.0000	0.0010	73	
1234678-HpCDF	*	0.010	0.0000	0.0000	0.0010	81	
1234789-HpCDF	*	0.010	0.0000	0.0000	0.0010	84	
OCDF	*	0.001	0.0000	0.0000	0.0010		
2378-TCDD	*	1.000	0.0010	0.0000	0.0010	80	
12378-PCDD	*	0.500	0.0005	0.0000	0.0010	91	
123478-HxCDD	*	0.100	0.0001	0.0000	0.0010	87	
123678-HxCDD	*	0.100	0.0001	0.0000	0.0010	53	
123789-HxCDD	*	0.100	0.0001	0.0000	0.0010		
1234678-HpCDD	*	0.010	0.0000	0.0000	0.0010	97	
OCDD	*	0.001	0.0000	0.0000	0.0010	110	
TEQ (Nato)			0.0029	0.0000			10

* Isomer Not detected
TEQ Toxic Equivalent Value
TEF Toxic Equivalent Factor
Conc Concentration
DL Detection Value

TEQ¹ Concentration of Non Detected
Congeners at Detection Limit
TEQ² Concentration of Non Detected
Congeners at Zero

Name of Analyst : K Pettit
Position : Technical Manager

Signature of Analyst : 





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Name of Client : Shanks plc
Address : New Inn, Pontypool, Gwent, S Wales

Test Certificate No: 105-2288

ANALYSIS OF PCDDs and PCDFs

Job Reference: Shanks - Pontypool
Sample Identifier : BH51
Sample No: 105-2288
Order No:

Date of Receipt : 05/10/05
Date of Analysis : 17/03/06
Date of Report : 20/03/06
No of Samples in Batch : 19
Sample Condition : normal

Instrument : Micromass Ultima NT
GC Column : DB5
Calibration File : 170306

Test Method : 1122
Blank :
Sample Size : 0.5

expressed as ng / l

Congener	Conc	TEFs	TEQ ¹	TEQ ²	DL	Rec %	Error %
2378-TCDF	*	0.100	0.0001	0.0000	0.0010	70	
12378-PCDF	*	0.050	0.0001	0.0000	0.0010	62	
23478-PCDF	*	0.500	0.0005	0.0000	0.0010	60	
123478-HxCDF	*	0.100	0.0001	0.0000	0.0010	60	
123678-HxCDF	*	0.100	0.0001	0.0000	0.0010	60	
234678-HxCDF	*	0.100	0.0001	0.0000	0.0010	60	
123789-HxCDF	*	0.100	0.0001	0.0000	0.0010	65	
1234678-HpCDF	*	0.010	0.0000	0.0000	0.0010	73	
1234789-HpCDF	*	0.010	0.0000	0.0000	0.0010	79	
OCDF	*	0.001	0.0000	0.0000	0.0010		
2378-TCDD	0.0080	1.000	0.0080	0.0080	0.0010	65	
12378-PCDD	*	0.500	0.0005	0.0000	0.0010	76	
123478-HxCDD	*	0.100	0.0001	0.0000	0.0010	77	
123678-HxCDD	*	0.100	0.0001	0.0000	0.0010	68	
123789-HxCDD	*	0.100	0.0001	0.0000	0.0010		
1234678-HpCDD	*	0.010	0.0000	0.0000	0.0010	90	
OCDD	*	0.001	0.0000	0.0000	0.0010	106	
TEQ (Nato)			0.0099	0.0080			10

* Isomer Not detected
TEQ Toxic Equivalent Value
TEF Toxic Equivalent Factor
Conc Concentration
DL Detection Value

TEQ¹ Concentration of Non Detected
Congeners at Detection Limit
TEQ² Concentration of Non Detected
Congeners at Zero

Name of Analyst : K Pettit
Position : Technical Manager

Signature of Analyst :





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Name of Client : Shanks plc
Address : New Inn, Pontypool, Gwent, S Wales

Test Certificate No: 105-2313

ANALYSIS OF PCDDs and PCDFs

Job Reference: Shanks - Pontypool
Sample Identifier : BH56
Sample No: 105-2313
Order No:

Date of Receipt : 05/10/05
Date of Analysis : 17/03/06
Date of Report : 20/03/06
No of Samples in Batch : 19
Sample Condition : normal

Instrument : Micromass Ultima NT
GC Column : DB5
Calibration File : 170306

Test Method : 1122

Blank :

Sample Size : 0.5


expressed as ng / l

Congener	Conc	TEFs	TEQ ¹	TEQ ²	DL	Rec %	Error %
2378-TCDF	*	0.100	0.0001	0.0000	0.0010	69	
12378-PCDF	*	0.050	0.0001	0.0000	0.0010	67	
23478-PCDF	*	0.500	0.0005	0.0000	0.0010	73	
123478-HxCDF	*	0.100	0.0001	0.0000	0.0010	54	
123678-HxCDF	*	0.100	0.0001	0.0000	0.0010	55	
234678-HxCDF	*	0.100	0.0001	0.0000	0.0010	58	
123789-HxCDF	*	0.100	0.0001	0.0000	0.0010	63	
1234678-HpCDF	*	0.010	0.0000	0.0000	0.0010	69	
1234789-HpCDF	*	0.010	0.0000	0.0000	0.0010	69	
OCDF	*	0.001	0.0000	0.0000	0.0010		
2378-TCDD	*	1.000	0.0010	0.0000	0.0010	62	
12378-PCDD	*	0.500	0.0005	0.0000	0.0010	85	
123478-HxCDD	*	0.100	0.0001	0.0000	0.0010	54	
123678-HxCDD	*	0.100	0.0001	0.0000	0.0010	54	
123789-HxCDD	*	0.100	0.0001	0.0000	0.0010		
1234678-HpCDD	*	0.010	0.0000	0.0000	0.0010	79	
OCDD	*	0.001	0.0000	0.0000	0.0010	84	
TEQ (Nato)			0.0029	0.0000			10

* Isomer Not detected
TEQ Toxic Equivalent Value
TEF Toxic Equivalent Factor
Conc Concentration
DL Detection Value

TEQ¹ Concentration of Non Detected
Congeners at Detection Limit
TEQ² Concentration of Non Detected
Congeners at Zero

Name of Analyst : K Pettit
Position : Technical Manager

Signature of Analyst : 





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Name of Client : Shanks plc
Address : New Inn, Pontypool, Gwent, S Wales

Test Certificate No: 105-2313

ANALYSIS OF PCDDs and PCDFs

Job Reference: Shanks - Pontypool
Sample Identifier : BH56
Sample No: 105-2313
Order No:

Date of Receipt : 05/10/05
Date of Analysis : 17/03/06
Date of Report : 20/03/06
No of Samples in Batch : 19
Sample Condition : normal

Instrument : Micromass Ultima NT
GC Column : DB5
Calibration File : 170306

Test Method : 1122
Blank :
Sample Size : 0.5

expressed as ng / l

Congener	Conc	TEFs	TEQ1	TEQ2	DL	Rec %	Error %
2378-TCDF	*	0.100	0.0001	0.0000	0.0010	69	
12378-PCDF	*	0.050	0.0001	0.0000	0.0010	67	
23478-PCDF	*	0.500	0.0005	0.0000	0.0010	73	
123478-HxCDF	*	0.100	0.0001	0.0000	0.0010	54	
123678-HxCDF	*	0.100	0.0001	0.0000	0.0010	55	
234678-HxCDF	*	0.100	0.0001	0.0000	0.0010	58	
123789-HxCDF	*	0.100	0.0001	0.0000	0.0010	63	
1234678-HpCDF	*	0.010	0.0000	0.0000	0.0010	69	
1234789-HpCDF	*	0.010	0.0000	0.0000	0.0010	69	
OCDF	*	0.001	0.0000	0.0000	0.0010		
2378-TCDD	*	1.000	0.0010	0.0000	0.0010	62	
12378-PCDD	*	0.500	0.0005	0.0000	0.0010	85	
123478-HxCDD	*	0.100	0.0001	0.0000	0.0010	54	
123678-HxCDD	*	0.100	0.0001	0.0000	0.0010	54	
123789-HxCDD	*	0.100	0.0001	0.0000	0.0010		
1234678-HpCDD	*	0.010	0.0000	0.0000	0.0010	79	
OCDD	*	0.001	0.0000	0.0000	0.0010	84	
TEQ (Nato)			0.0029	0.0000			10

* Isomer Not detected
TEQ Toxic Equivalent Value
TEF Toxic Equivalent Factor
Conc Concentration

TEQ1 Concentration of Non Detected
Congeners at Detection Limit
TEQ2 Concentration of Non Detected
Congeners at Zero





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Name of Client : Shanks plc
Address : New Inn, Pontypool, Gwent, S Wales

Test Certificate No: 105-2287

ANALYSIS OF PCDDs and PCDFs

Job Reference: Shanks - Pontypool
Sample Identifier : BH68
Sample No: 105-2287
Order No:

Date of Receipt : 05/10/05
Date of Analysis : 17/03/06
Date of Report : 20/03/06
No of Samples in Batch : 19
Sample Condition : normal

Instrument : Micromass Ultima NT
GC Column : DB5
Calibration File : 170306

Test Method : 1122

Blank :

Sample Size : 0.5

expressed as ng / l

Congener	Conc	TEFs	TEQ ¹	TEQ ²	DL	Rec %	Error %
2378-TCDF	*	0.100	0.0001	0.0000	0.0010	71	
12378-PCDF	*	0.050	0.0001	0.0000	0.0010	70	
23478-PCDF	*	0.500	0.0005	0.0000	0.0010	69	
123478-HxCDF	*	0.100	0.0001	0.0000	0.0010	55	
123678-HxCDF	*	0.100	0.0001	0.0000	0.0010	54	
234678-HxCDF	*	0.100	0.0001	0.0000	0.0010	59	
123789-HxCDF	*	0.100	0.0001	0.0000	0.0010	63	
1234678-HpCDF	*	0.010	0.0000	0.0000	0.0010	67	
1234789-HpCDF	*	0.010	0.0000	0.0000	0.0010	69	
OCDF	*	0.001	0.0000	0.0000	0.0010		
2378-TCDD	*	1.000	0.0010	0.0000	0.0010	64	
12378-PCDD	*	0.500	0.0005	0.0000	0.0010	82	
123478-HxCDD	*	0.100	0.0001	0.0000	0.0010	56	
123678-HxCDD	*	0.100	0.0001	0.0000	0.0010	56	
123789-HxCDD	*	0.100	0.0001	0.0000	0.0010		
1234678-HpCDD	*	0.010	0.0000	0.0000	0.0010	83	
OCDD	*	0.001	0.0000	0.0000	0.0010	97	
TEQ (Nato)			0.0029	0.0000			10

* Isomer Not detected
TEQ Toxic Equivalent Value
TEF Toxic Equivalent Factor
Conc Concentration
DL Detection Value

TEQ¹ Concentration of Non Detected
Congeners at Detection Limit
TEQ² Concentration of Non Detected
Congeners at Zero

Name of Analyst : K Pettit
Position : Technical Manager

Signature of Analyst :





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Name of Client : Shanks plc
Address : New Inn, Pontypool, Gwent, S Wales

Test Certificate No: 105-2286

ANALYSIS OF PCDDs and PCDFs

Job Reference: Shanks - Pontypool
Sample Identifier : BH88
Sample No: 105-2286
Order No:

Date of Receipt : 05/10/05
Date of Analysis : 17/03/06
Date of Report : 20/03/06
No of Samples in Batch : 19
Sample Condition : normal

Instrument : Micromass Ultima NT
GC Column : DB5
Calibration File : 170306

Test Method : 1122
Blank :
Sample Size : 0.5

expressed as ng / l

Congener	Conc	TEFs	TEQ ¹	TEQ ²	DL	Rec %	Error %
2378-TCDF	*	0.100	0.0001	0.0000	0.0010	79	
12378-PCDF	*	0.050	0.0001	0.0000	0.0010	77	
23478-PCDF	*	0.500	0.0005	0.0000	0.0010	72	
123478-HxCDF	*	0.100	0.0001	0.0000	0.0010	57	
123678-HxCDF	*	0.100	0.0001	0.0000	0.0010	56	
234678-HxCDF	*	0.100	0.0001	0.0000	0.0010	63	
123789-HxCDF	*	0.100	0.0001	0.0000	0.0010	70	
1234678-HpCDF	*	0.010	0.0000	0.0000	0.0010	78	
1234789-HpCDF	*	0.010	0.0000	0.0000	0.0010	86	
OCDF	*	0.001	0.0000	0.0000	0.0010		
2378-TCDD	*	1.000	0.0010	0.0000	0.0010	86	
12378-PCDD	*	0.500	0.0005	0.0000	0.0010	96	
123478-HxCDD	*	0.100	0.0001	0.0000	0.0010	82	
123678-HxCDD	*	0.100	0.0001	0.0000	0.0010	86	
123789-HxCDD	*	0.100	0.0001	0.0000	0.0010		
1234678-HpCDD	*	0.010	0.0000	0.0000	0.0010	100	
OCDD	*	0.001	0.0000	0.0000	0.0010	118	
TEQ (Nato)			0.0029	0.0000			10

* Isomer Not detected
TEQ Toxic Equivalent Value
TEF Toxic Equivalent Factor
Conc Concentration
DL Detection Value

TEQ¹ Concentration of Non Detected
Congeners at Detection Limit
TEQ² Concentration of Non Detected
Congeners at Zero

Name of Analyst : K Pettit
Position : Technical Manager

Signature of Analyst : 





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Name of Client : Shanks plc
Address : New Inn, Pontypool, Gwent, S Wales

Test Certificate No: 105-2281

ANALYSIS OF PCDDs and PCDFs

Job Reference: Shanks - Pontypool
Sample Identifier : BH89
Sample No: 105-2281
Order No:

Date of Receipt : 05/10/05
Date of Analysis : 17/03/06
Date of Report : 20/03/06
No of Samples in Batch : 19
Sample Condition : normal

Instrument : Micromass Ultima NT
GC Column : DB5
Calibration File : 170306

Test Method : 1122

Blank :

Sample Size : 0.5

expressed as ng / l

Congener	Conc	TEFs	TEQ ¹	TEQ ²	DL	Rec %	Error %
2378-TCDF	*	0.100	0.0001	0.0000	0.0010	74	
12378-PCDF	*	0.050	0.0001	0.0000	0.0010	70	
23478-PCDF	*	0.500	0.0005	0.0000	0.0010	77	
123478-HxCDF	*	0.100	0.0001	0.0000	0.0010	60	
123678-HxCDF	*	0.100	0.0001	0.0000	0.0010	63	
234678-HxCDF	*	0.100	0.0001	0.0000	0.0010	59	
123789-HxCDF	*	0.100	0.0001	0.0000	0.0010	68	
1234678-HpCDF	*	0.010	0.0000	0.0000	0.0010	76	
1234789-HpCDF	*	0.010	0.0000	0.0000	0.0010	82	
OCDF	*	0.001	0.0000	0.0000	0.0010		
2378-TCDD	*	1.000	0.0010	0.0000	0.0010	78	
12378-PCDD	*	0.500	0.0005	0.0000	0.0010	102	
123478-HxCDD	*	0.100	0.0001	0.0000	0.0010	79	
123678-HxCDD	*	0.100	0.0001	0.0000	0.0010	64	
123789-HxCDD	*	0.100	0.0001	0.0000	0.0010		
1234678-HpCDD	*	0.010	0.0000	0.0000	0.0010	96	
OCDD	*	0.001	0.0000	0.0000	0.0010	116	
TEQ (Nato)			0.0029	0.0000			10

* Isomer Not detected
TEQ Toxic Equivalent Value
TEF Toxic Equivalent Factor
Conc Concentration
DL Detection Value

TEQ¹ Concentration of Non Detected
Congeners at Detection Limit
TEQ² Concentration of Non Detected
Congeners at Zero

Name of Analyst : K Pettit
Position : Technical Manager

Signature of Analyst :

