

FEB-19-02 11:12

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612-607-6444

T-543 P. 02/05 F-866

1700 Elm Street - Suite 200
Minneapolis, MN 55414Tel: 612-607-1700
Fax: 612-607-6444**Pace Analytical™****Method 8290 Analysis Results**

Client - ATC

DRAFT

Client's Sample ID	ATC-0123-STY-DX1		
Lab Sample ID	103286274		
Filename	U20212B_08		
Injected By	BAL		
Total Amount Extracted	1 m2	Matrix	WIPE
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	01/23/2002
ICAL Date	01/25/2002	Received	01/25/2002
CCal Filename(s)	U20212A_11 & U20212B_15	Extracted	02/08/2002
Method Blank ID	BLANK-1457	Analyzed	02/13/2002 05:22

Native Isomers	Conc ng/m2	EMPC ng/m2	LRL ng/m2		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	----	0.0024	A	2,3,7,8-TCDF-13C	2.00	94
Total TCDF	ND	----	0.0020		2,3,7,8-TCDD-13C	2.00	93
					1,2,3,7,8-PeCDF-13C	2.00	102
2,3,7,8-TCDD	ND	----	0.0026	A	2,3,4,7,8-PeCDF-13C	2.00	99
Total TCDD	0.0063	----	0.0020	J	1,2,3,7,8-PeCDD-13C	2.00	119
					1,2,3,4,7,8-HxCDF-13C	2.00	120
1,2,3,7,8-PeCDF	ND	----	0.0100		1,2,3,6,7,8-HxCDF-13C	2.00	103
2,3,4,7,8-PeCDF	ND	----	0.0100		2,3,4,6,7,8-HxCDF-13C	2.00	107
Total PeCDF	ND	----	0.0100		1,2,3,7,8,9-HxCDF-13C	2.00	104
					1,2,3,4,7,8-HxCDD-13C	2.00	129
1,2,3,7,8-PeCDD	ND	----	0.0100		1,2,3,6,7,8-HxCDD-13C	2.00	125
Total PeCDD	ND	----	0.0100		1,2,3,4,6,7,8-HpCDF-13C	2.00	116
					1,2,3,4,7,8,9-HpCDF-13C	2.00	84
1,2,3,4,7,8-HxCDF	ND	----	0.0100		1,2,3,4,6,7,8-HpCDD-13C	2.00	98
1,2,3,6,7,8-HxCDF	ND	----	0.0100		OCDD-13C	4.00	66
2,3,4,6,7,8-HxCDF	ND	----	0.0100				
1,2,3,7,8,9-HxCDF	ND	----	0.0100		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	----	0.0100		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	----	0.0100		2,3,7,8-TCDD-37Cl4	0.20	73
1,2,3,6,7,8-HxCDD	ND	----	0.0100				
1,2,3,7,8,9-HxCDD	ND	----	0.0100				
Total HxCDD	0.0260	----	0.0100	J			
1,2,3,4,6,7,8-HpCDF	ND	----	0.0100		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	----	0.0100		Equivalence: 0.00 ng/m2		
Total HpCDF	ND	----	0.0100		(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	ND	----	0.0100				
Total HpCDD	ND	----	0.0100				
OCDF	ND	----	0.0200				
OCDD	----	0.024	0.0200	I			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers)

EMPC = Estimated Maximum Possible Concentration

A = Detection Limit based on signal-to-noise measurement

J = Concentration detected is below the calibration range

B = Less than 10 times higher than method blank level

P = Recovery outside of target range

Nn = Value obtained from additional analysis

LRL = Lower Reporting Limit

I = Interference

E = PCDE Interference

S = Saturated signal

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

Report No.02-1053443

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T-543

P. 03/05

F-866

1700 Elm Street - Suite 200
Minneapolis, MN 55414Tel: 612-607-1700
Fax: 612-607-6444**Pace Analytical™****Method 8290 Analysis Results**

Client - ATC

DRAFT

Client's Sample ID	ATC-0123-STY-DX2		
Lab Sample ID	103286282		
Filename	U20212B_09		
Injected By	BAL		
Total Amount Extracted	1 m2	Matrix	WIPE
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	01/23/2002
ICAL Date	01/25/2002	Received	01/25/2002
CCal Filename(s)	U20212A_11 & U20212B_15	Extracted	02/08/2002
Method Blank ID	BLANK-1457	Analyzed	02/13/2002 06:11

Native Isomers	Conc ng/m2	EMPC ng/m2	LRL ng/m2		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	----	0.0029	A	2,3,7,8-TCDF-13C	2.00	93
Total TCDF	ND	----	0.0020		2,3,7,8-TCDD-13C	2.00	96
					1,2,3,7,8-PeCDF-13C	2.00	101
2,3,7,8-TCDD	ND	----	0.0032	A	2,3,4,7,8-PeCDF-13C	2.00	98
Total TCDD	ND	----	0.0020		1,2,3,7,8-PeCDD-13C	2.00	118
					1,2,3,4,7,8-HxCDF-13C	2.00	122
1,2,3,7,8-PeCDF	ND	----	0.0100		1,2,3,6,7,8-HxCDF-13C	2.00	103
2,3,4,7,8-PeCDF	ND	----	0.0100		2,3,4,6,7,8-HxCDF-13C	2.00	104
Total PeCDF	ND	----	0.0100		1,2,3,7,8,9-HxCDF-13C	2.00	99
					1,2,3,4,7,8-HxCDD-13C	2.00	136 P
1,2,3,7,8-PeCDD	ND	----	0.0100		1,2,3,6,7,8-HxCDD-13C	2.00	116
Total PeCDD	ND	----	0.0100		1,2,3,4,6,7,8-HpCDF-13C	2.00	117
					1,2,3,4,7,8,9-HpCDF-13C	2.00	92
1,2,3,4,7,8-HxCDF	ND	----	0.0100		1,2,3,4,6,7,8-HpCDD-13C	2.00	106
1,2,3,6,7,8-HxCDF	ND	----	0.0100		OCDD-13C	4.00	65
2,3,4,6,7,8-HxCDF	ND	----	0.0100				
1,2,3,7,8,9-HxCDF	ND	----	0.0100		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	----	0.0100		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	----	0.0100		2,3,7,8-TCDD-37Cl4	0.20	73
1,2,3,6,7,8-HxCDD	ND	----	0.0100				
1,2,3,7,8,9-HxCDD	ND	----	0.0100				
Total HxCDD	ND	----	0.0100				
1,2,3,4,6,7,8-HpCDF	ND	----	0.0100		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	----	0.0100		Equivalence: 0.000044 ng/m2		
Total HpCDF	ND	----	0.0100		(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	ND	----	0.0100				
Total HpCDD	ND	----	0.0100				
OCDF	ND	----	0.0200				
OCDD	0.044	----	0.0200	J			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers)

EMPC = Estimated Maximum Possible Concentration

A = Detection Limit based on signal-to-noise measurement

J = Concentration detected is below the calibration range

B = Less than 10 times higher than method blank level

P = Recovery outside of target range

Nn = Value obtained from additional analysis

LRL = Lower Reporting Limit

I = Interference

E = PCDE Interference

S = Saturated signal

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

* = See Discussion

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FROM-PACE ANALYTICAL

612-607-6444

T-543 P.04/05 F-866

1700 Elm Street - Suite 200
Minneapolis, MN 55414Tel: 612-607-1700
Fax: 612-607-6444**Pace Analytical™****Method 8290 Analysis Results**

Client - ATC

DRAFT

Client's Sample ID	ATC-0123-STY-DX3		
Lab Sample ID	103286290		
Filename	U20212B_10		
Injected By	BAL		
Total Amount Extracted	1 m2	Matrix	WIPE
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	01/23/2002
ICAL Date	01/25/2002	Received	01/25/2002
CCal Filename(s)	U20212A_11 & U20212B_15	Extracted	02/08/2002
Method Blank ID	BLANK-1457	Analyzed	02/13/2002 07:01

Native Isomers	Conc ng/m2	EMPC ng/m2	LRL ng/m2		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	----	0.0031	0.0025	IA	2,3,7,8-TCDF-13C	2.00	89
Total TCDF	0.061	----	0.0020		2,3,7,8-TCDD-13C	2.00	97
					1,2,3,7,8-PeCDF-13C	2.00	96
2,3,7,8-TCDD	ND	----	0.0046	A	2,3,4,7,8-PeCDF-13C	2.00	92
Total TCDD	0.077	----	0.0020		1,2,3,7,8-PeCDD-13C	2.00	113
					1,2,3,4,7,8-HxCDF-13C	2.00	113
1,2,3,7,8-PeCDF	ND	----	0.0100		1,2,3,6,7,8-HxCDF-13C	2.00	90
2,3,4,7,8-PeCDF	ND	----	0.0100		2,3,4,6,7,8-HxCDF-13C	2.00	98
Total PeCDF	0.027	----	0.0100	J	1,2,3,7,8,9-HxCDF-13C	2.00	98
					1,2,3,4,7,8-HxCDD-13C	2.00	122
1,2,3,7,8-PeCDD	ND	----	0.0100		1,2,3,6,7,8-HxCDD-13C	2.00	112
Total PeCDD	0.079	----	0.0100		1,2,3,4,6,7,8-HpCDF-13C	2.00	112
					1,2,3,4,7,8,9-HpCDF-13C	2.00	91
1,2,3,4,7,8-HxCDF	ND	----	0.0100		1,2,3,4,6,7,8-HpCDD-13C	2.00	100
1,2,3,6,7,8-HxCDF	ND	----	0.0100		OCDD-13C	4.00	74
2,3,4,6,7,8-HxCDF	ND	----	0.0100				
1,2,3,7,8,9-HxCDF	ND	----	0.0100		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	----	0.0100		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	----	0.0100		2,3,7,8-TCDD-37Cl4	0.20	78
1,2,3,6,7,8-HxCDD	ND	----	0.0100				
1,2,3,7,8,9-HxCDD	ND	----	0.0100				
Total HxCDD	0.074	----	0.0100				
1,2,3,4,6,7,8-HpCDF	0.020	----	0.0100	J	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	----	0.0100		Equivalence: 0.00072 ng/m2		
Total HpCDF	0.020	----	0.0100	J	(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	0.033	----	0.0100	J			
Total HpCDD	0.056	----	0.0100	J			
OCDF	ND	----	0.0200				
OCDD	0.190	----	0.0200				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers)
 EMPC = Estimated Maximum Possible Concentration
 A = Detection Limit based on signal-to-noise measurement
 J = Concentration detected is below the calibration range
 B = Less than 10 times higher than method blank level
 P = Recovery outside of target range
 Nn = Value obtained from additional analysis

LRL = Lower Reporting Limit
 I = Interference
 E = PCDE Interference
 S = Saturated signal
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T-543 P.05/05 F-866

1700 Elm Street - Suite 200
Minneapolis, MN 55414Tel: 612-607-1700
Fax: 612-607-6444**Pace Analytical™****Method 8290 Analysis Results**

Client - ATC

DRAFT

Client's Sample ID	ATC-0123-STY-DX4		
Lab Sample ID	103286308		
Filename	U20212B_11		
Injected By	BAL		
Total Amount Extracted	1 m2	Matrix	WIPE
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	01/23/2002
ICAL Date	01/25/2002	Received	01/25/2002
CCal Filename(s)	U20212A_11 & U20212B_15	Extracted	02/08/2002
Method Blank ID	BLANK-1457	Analyzed	02/13/2002 07:51

Native Isomers	Conc ng/m2	EMPC ng/m2	LRL ng/m2	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	----	0.0020 A	2,3,7,8-TCDF-13C	2.00	90
Total TCDF	ND	----	0.0020	2,3,7,8-TCDD-13C	2.00	99
				1,2,3,7,8-PeCDF-13C	2.00	101
2,3,7,8-TCDD	ND	----	0.0024 A	2,3,4,7,8-PeCDF-13C	2.00	97
Total TCDD	ND	----	0.0020	1,2,3,7,8-PeCDD-13C	2.00	117
				1,2,3,4,7,8-HxCDF-13C	2.00	123
1,2,3,7,8-PeCDF	ND	----	0.0100	1,2,3,6,7,8-HxCDF-13C	2.00	108
2,3,4,7,8-PeCDF	ND	----	0.0100	2,3,4,6,7,8-HxCDF-13C	2.00	109
Total PeCDF	ND	----	0.0100	1,2,3,7,8,9-HxCDF-13C	2.00	103
				1,2,3,4,7,8-HxCDD-13C	2.00	125
1,2,3,7,8-PeCDD	ND	----	0.0100	1,2,3,6,7,8-HxCDD-13C	2.00	126
Total PeCDD	ND	----	0.0100	1,2,3,4,6,7,8-HpCDF-13C	2.00	123
				1,2,3,4,7,8,9-HpCDF-13C	2.00	98
1,2,3,4,7,8-HxCDF	ND	----	0.0100	1,2,3,4,6,7,8-HpCDD-13C	2.00	111
1,2,3,6,7,8-HxCDF	ND	----	0.0100	OCDD-13C	4.00	83
2,3,4,6,7,8-HxCDF	ND	----	0.0100			
1,2,3,7,8,9-HxCDF	ND	----	0.0100	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	----	0.0100	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	----	0.0100	2,3,7,8-TCDD-37Cl4	0.20	80
1,2,3,6,7,8-HxCDD	ND	----	0.0100			
1,2,3,7,8,9-HxCDD	ND	----	0.0100			
Total HxCDD	ND	----	0.0100			
1,2,3,4,6,7,8-HpCDF	ND	----	0.0100	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	----	0.0100	Equivalence: 0.00 ng/m2		
Total HpCDF	ND	----	0.0100	(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	ND	----	0.0100			
Total HpCDD	ND	----	0.0100			
OCDF	ND	----	0.0200			
OCDD	ND	----	0.0200			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers)
 EMPC = Estimated Maximum Possible Concentration
 A = Detection Limit based on signal-to-noise measurement
 J = Concentration detected is below the calibration range
 B = Less than 10 times higher than method blank level
 P = Recovery outside of target range
 Nn = Value obtained from additional analysis

LRL = Lower Reporting Limit
 I = Interference
 E = PCDE Interference
 S = Saturated signal
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 NA = Not Applicable
 NC = Not Calculated
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