

Your Project #: B5B3143
Your C.O.C. #: na

Attention:Debbie Nordbruget

MAXXAM ANALYTICS
4606 Canada Way
Burnaby, BC
CANADA V5G 1K5

Report Date: 2016/01/12
Report #: R2095111
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B600515

Received: 2016/01/06, 08:20

Sample Matrix: WATER
Samples Received: 2

Analyses	Quantity	Date		Laboratory Method	Primary Reference
		Extracted	Analyzed		
Pesticides*	1	2016/01/07	2016/01/11	STL SOP-00164	MA403-Pest. 3.1 R2 m
Resin and Fatty Acids*	1	2016/01/06	2016/01/07	STL SOP-00152	MA414-Aci-g-r-1.0R3m

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.
Note: RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

* Maxxam is accredited as per the MDDELCC program.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Lauriane Bernard, Project Manager
Email: LBernard@maxxam.ca
Phone# (514)448-9001

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This report has been generated and distributed using a secure automated process.
Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B600515
Report Date: 2016/01/12

MAXXAM ANALYTICS
Client Project #: B5B3143

PESTICIDES (WATER)

Maxxam ID		BX0774		
Sampling Date		2015/12/22 09:30		
COC Number		na		
	Units	NW7830- 03R/COMMUNIT Y WELL #1	RDL	QC Batch
Bendiocarb	ug/L	<0.2	0.2	1557654
Atrazine and its metabolites	ug/L	<0.3	0.3	1557654
Azinphos-methyl	ug/L	<0.3	0.3	1557654
Carbaryl	ug/L	<0.2	0.2	1557654
Carbofuran	ug/L	<0.2	0.2	1557654
Chlorpyrifos	ug/L	<0.2	0.2	1557654
Cyanazine (Bladex)	ug/L	<0.2	0.2	1557654
Diazinon	ug/L	<0.2	0.2	1557654
Dimethoate	ug/L	<0.2	0.2	1557654
Diuron	ug/L	<0.3	0.3	1557654
Malathion	ug/L	<0.2	0.2	1557654
Methoxychlor	ug/L	<0.03	0.03	1557654
Metolachlor (Dual)	ug/L	<0.2	0.2	1557654
Metribuzin (Sencor)	ug/L	<0.2	0.2	1557654
Parathion	ug/L	<0.2	0.2	1557654
Phorate (Thimet)	ug/L	<0.2	0.2	1557654
Simazine	ug/L	<0.2	0.2	1557654
Terbufos	ug/L	<0.2	0.2	1557654
Trifluralin	ug/L	<0.2	0.2	1557654
Surrogate Recovery (%)				
Decachlorobiphenyl	%	99	N/A	1557654
Pronamide	%	94	N/A	1557654
Terbutryne	%	97	N/A	1557654
RDL = Reportable Detection Limit QC Batch = Quality Control Batch N/A = Not Applicable				

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MAXXAM ANALYTICS
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RESIN AND FATTY ACIDS BY GCMS (WATER)

Maxxam ID		BX0773		
Sampling Date		2015/12/22 09:30		
COC Number		na		
	Units	NW7830- 01R/COMMUNIT Y WELL #1	RDL	QC Batch
Palmitoleic acid	ug/L	<3.0	3.0	1558095
Palmitic acid	ug/L	<30	30	1558095
Linoleic acid	ug/L	<3.0	3.0	1558095
Linolenic acid	ug/L	<3.0	3.0	1558095
Oleic acid	ug/L	<3.0	3.0	1558095
Stearic acid	ug/L	<30	30	1558095
9,10-Dichlorostearic acid	ug/L	<3.0	3.0	1558095
Total Fatty Acids	ug/L	<30	30	1558095
Pimaric acid	ug/L	<3.0	3.0	1558095
Sandaracopimaric acid	ug/L	<3.0	3.0	1558095
Isopimaric acid	ug/L	<3.0	3.0	1558095
Palustric acid	ug/L	<3.0	3.0	1558095
Levopimaric acid	ug/L	<3.0	3.0	1558095
Dehydroabietic acid	ug/L	<5.0	5.0	1558095
Abietic acid	ug/L	<5.0	5.0	1558095
Neoabietic acid	ug/L	<3.0	3.0	1558095
14-Chlorodehydroabietic acid	ug/L	<3.0	3.0	1558095
12-Chlorodehydroabietic acid	ug/L	<3.0	3.0	1558095
Total Resin Acids	ug/L	<5.0	5.0	1558095
Surrogate Recovery (%)				
O-Methylpodocarpic acid	%	85	N/A	1558095
RDL = Reportable Detection Limit QC Batch = Quality Control Batch N/A = Not Applicable				

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MAXXAM ANALYTICS
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GENERAL COMMENTS

Condition of sample(s) upon receipt: GOOD except for the following:

Pesticides: Holding time already past.: BX0774

PESTICIDES (WATER)

Please note that the results have not been corrected for QC recoveries (spiked blank and method blank) nor for the surrogates.

RESIN AND FATTY ACIDS BY GCMS (WATER)

Please note that the results have not been corrected for QC recoveries (spiked blank and method blank) nor for the surrogates.

Un-rounded results are used in the totals "Total Resin Acids" and "Total Fatty Acids" calculations. These totals results are then rounded to two significant figures.

The totals indicated are calculated only for the requested parameters.

Results relate only to the items tested.

Maxxam Job #: B600515
Report Date: 2016/01/12

MAXXAM ANALYTICS
Client Project #: B5B3143

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	Units	QC Limits
1557654	YW	Spiked Blank	Decachlorobiphenyl	2016/01/11		97	%	60 - 130
			Pronamide	2016/01/11		97	%	60 - 130
			Terbutryne	2016/01/11		99	%	60 - 130
			Bendiocarb	2016/01/11		101	%	60 - 130
			Atrazine and its metabolites	2016/01/11		100	%	60 - 130
			Azinphos-methyl	2016/01/11		108	%	60 - 130
			Carbaryl	2016/01/11		99	%	60 - 130
			Carbofuran	2016/01/11		104	%	60 - 130
			Chlorpyrifos	2016/01/11		104	%	60 - 130
			Cyanazine (Bladex)	2016/01/11		101	%	60 - 130
			Diazinon	2016/01/11		96	%	60 - 130
			Dimethoate	2016/01/11		95	%	60 - 130
			Diuron	2016/01/11		149	%	30 - 160
			Malathion	2016/01/11		105	%	60 - 130
			Methoxychlor	2016/01/11		109	%	60 - 130
			Metolachlor (Dual)	2016/01/11		104	%	60 - 130
			Metribuzin (Sencor)	2016/01/11		70	%	60 - 130
			Parathion	2016/01/11		107	%	60 - 130
			Phorate (Thimet)	2016/01/11		100	%	60 - 130
			Simazine	2016/01/11		107	%	60 - 130
Terbufos	2016/01/11		103	%	60 - 130			
Trifluralin	2016/01/11		106	%	60 - 130			
1557654	YW	Method Blank	Decachlorobiphenyl	2016/01/11		95	%	60 - 130
			Pronamide	2016/01/11		95	%	60 - 130
			Terbutryne	2016/01/11		97	%	60 - 130
			Bendiocarb	2016/01/11	<0.2		ug/L	
			Atrazine and its metabolites	2016/01/11	<0.3		ug/L	
			Azinphos-methyl	2016/01/11	<0.3		ug/L	
			Carbaryl	2016/01/11	<0.2		ug/L	
			Carbofuran	2016/01/11	<0.2		ug/L	
			Chlorpyrifos	2016/01/11	<0.2		ug/L	
			Cyanazine (Bladex)	2016/01/11	<0.2		ug/L	
			Diazinon	2016/01/11	<0.2		ug/L	
			Dimethoate	2016/01/11	<0.2		ug/L	
			Diuron	2016/01/11	<0.3		ug/L	
			Malathion	2016/01/11	<0.2		ug/L	
			Methoxychlor	2016/01/11	<0.03		ug/L	
			Metolachlor (Dual)	2016/01/11	<0.2		ug/L	
			Metribuzin (Sencor)	2016/01/11	<0.2		ug/L	
			Parathion	2016/01/11	<0.2		ug/L	
			Phorate (Thimet)	2016/01/11	<0.2		ug/L	
			Simazine	2016/01/11	<0.2		ug/L	
Terbufos	2016/01/11	<0.2		ug/L				
Trifluralin	2016/01/11	<0.2		ug/L				
1558095	TN	Spiked Blank	O-Methylpodocarpic acid	2016/01/07		89	%	60 - 130
			Palmitoleic acid	2016/01/07		94	%	60 - 130
			Palmitic acid	2016/01/07		136 (1)	%	60 - 130
			Linoleic acid	2016/01/07		87	%	60 - 130
			Linolenic acid	2016/01/07		78	%	60 - 130
			Oleic acid	2016/01/07		101	%	60 - 130
			Stearic acid	2016/01/07		122	%	60 - 130
			9,10-Dichlorostearic acid	2016/01/07		105	%	60 - 130
			Pimaric acid	2016/01/07		93	%	60 - 130

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	Units	QC Limits	
1558095	TN	Method Blank	Sandaracopimaric acid	2016/01/07		92	%	60 - 130	
			Isopimaric acid	2016/01/07		94	%	60 - 130	
			Palustric acid	2016/01/07		81	%	60 - 130	
			Levopimaric acid	2016/01/07		58 (1)	%	60 - 130	
			Dehydroabietic acid	2016/01/07		122	%	60 - 130	
			Abietic acid	2016/01/07		100	%	60 - 130	
			Neoabietic acid	2016/01/07		82	%	60 - 130	
			14-Chlorodehydroabietic acid	2016/01/07		91	%	60 - 130	
			12-Chlorodehydroabietic acid	2016/01/07		92	%	60 - 130	
			O-Methylpodocarpic acid	2016/01/07		89	%	60 - 130	
			Palmitoleic acid	2016/01/07		<3.0			ug/L
			Palmitic acid	2016/01/07		<30			ug/L
			Linoleic acid	2016/01/07		<3.0			ug/L
			Linolenic acid	2016/01/07		<3.0			ug/L
			Oleic acid	2016/01/07		<3.0			ug/L
			Stearic acid	2016/01/07		<30			ug/L
			9,10-Dichlorostearic acid	2016/01/07		<3.0			ug/L
			Total Fatty Acids	2016/01/07		<30			ug/L
			Pimaric acid	2016/01/07		<3.0			ug/L
			Sandaracopimaric acid	2016/01/07		<3.0			ug/L
			Isopimaric acid	2016/01/07		<3.0			ug/L
			Palustric acid	2016/01/07		<3.0			ug/L
			Levopimaric acid	2016/01/07		<3.0			ug/L
			Dehydroabietic acid	2016/01/07		<5.0			ug/L
			Abietic acid	2016/01/07		<5.0			ug/L
			Neoabietic acid	2016/01/07		<3.0			ug/L
			14-Chlorodehydroabietic acid	2016/01/07		<3.0			ug/L
			12-Chlorodehydroabietic acid	2016/01/07		<3.0			ug/L
			Total Resin Acids	2016/01/07		<5.0			ug/L

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

(1) Recovery or relative percent difference (RPD) for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria

FUNDAMENTAL LABORATORY ACCEPTANCE GUIDELINE

Invoice To:

MAXXAM ANALYTICS
BURNABY
4606 Canada Way
Burnaby, BC
CANADA V5G 1K5
Client Contact:
Debbie Nordbruget

Maxxam Job #: B600515
Date Received: 2016/01/06
Your C.O.C. #: na
Your Project #: B5B3143
Maxxam Project Manager: Lauriane Bernard
Quote #: B20512

Samples received after hold time exceeded

Report Comments

Received Date:	<u>2016/01/06</u>	Time:	<u>08:20</u>	By:	<u>GM1</u>
Inspected Date:	<u>2016/01/06</u>	Time:	<u>12:27</u>	By:	<u>GM1</u>
FLAG Created Date:	<u>2016/01/12</u>	Time:	<u>08:52</u>	By:	<u>LD</u>

Maxxam Job #: B600515
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VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Handwritten signature of Anton Perera in blue ink.

Anton Perera

Handwritten signature of Tien Nguyen Thi in blue ink.



Tien Nguyen Thi, B.Sc., Chemist, Analyst

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics
 4606 Canada Way
 Burnaby, British Columbia, V5G 1K5
 (604) 734 7276
 (604) 731 2386



McElhanney Consulting Services Ltd.
 Maxxam PM Debbie Nordbruket

1/1

SUBCONTRACTING REQUEST FORM

To: Maxxam Montreal (From Burnaby)

Job# B5B3143

Yes No International Sample/BioHazard (if yes, add copy of Movement Cert., heat treat is required prior to disposal)
 Yes No Special Protocol (if yes, Protocol _____)

Sample ID	Matrix	Test(s) Required	Container	Date Sampled	Date Required
NW7830-01R\COMMUNITY WELL #1	W	RFA Water Subcontract	-LAG	2015/12/22 09:30	2016/01/14
NW7830-03R\COMMUNITY WELL #1	W	Pesticides in Water by LCMS Subcontract	1-LAG	2015/12/22 09:30	2016/01/13

Please run PEST - QBW Scan

	Temp. 1	Temp. 2	Temp. 3		
Cooler #1	6	6	5	Custody Seal Present	YES NO
				Custody Seal Intact	YES NO
				Ice Present Upon Receipt	YES NO
Cooler #2				Custody Seal Present	YES NO
				Custody Seal Intact	YES NO
				Ice Present Upon Receipt	YES NO
Cooler #3				Custody Seal Present	YES NO
				Custody Seal Intact	YES NO
				Ice Present Upon Receipt	YES NA

Receiving Maxxam Location: Maxxam Montreal (From Burnaby)

JOB # _____

Relinquished by (Sign) [Signature] (print) MARILYN TORUM Date and Time JAN 05/16 15:20
 Received by (Sign) [Signature] (print) ANN PETSAMARTIA Date and Time 2016/01/06 08:20

NOTES:

- 1) Please call us if due date cannot be met. Please reference Sample ID on your report.
- 2) Include copy of this completed form, Client COC & signed final report to CustomerServiceBc@MaxxamAnalytics.com and to DNordbruket@maxxam.ca

Reporting Requirements:

National:
 Regional:

06-Jan-16 08:20

Lauriane Bernard
 B600515

GMI MTL-0118

Shipping Instructions

Ship Immediately (highlight Yellow)
 Requires 9am
 Requires Sat. Delivery
 Register Ship next available day
 Ship Cold
 Ship Room Temp
 Ship Frozen
 COC Must Be Attached
 Sender (Print) MARILYN Initial MT

Shipping Department Checklist

Correct Shipping location
 Correct Sample Ids (Paperwork vs Bottles)
 Yes No Special-Cooler, Ice, Tape-custody seal, Date & Sign
 Date Shipped JAN 05/16 Number of coolers _____
 Shipper (Print) MARILYN Initial MT