PALL Life Sciences

600 South Wagner Road
Ann Arbor, MI 48103-6019
Phone: 734-913-6130
Fax: 734-913-6103

Sample Analysis Report

January, 2008

Analyst Initials

Date 02/04/08

Sample Name - Date Sampled - Time Sampled	1,4-Dioxane Results (ppb)	R.L. (ppb)	Bromate Results (ppb)	R.L. (ppb)	Bromide Results (ppb)	R.L. (ppb)	Comments
EXTRACTION WELLS							
AE-3-01-07-08-11:19	90	1.0		5.0		10.0	
HZ-S-01-07-08-10:05	1092	1.0		5.0		10.0	
LB-1-01-07-08-11:15	498	1.0		5.0		10.0	
LB-3-01-07-08-11:17	540	1.0		5.0		10.0	
PW-1-01-07-08-09:37	1309	1.0		5.0		10.0	
DOLPH-01-07-08-09:30	87	1.0		5.0		10.0	
TW-5-01-07-08-09:15	1097	1.0		5.0		10.0	
TW-6-01-07-08-09:39	182	1.0		5.0		10.0	
TW-8-01-07-08-09:03	536	1.0		5.0		10.0	
TW-9-01-07-08-10:00	1589	1.0		5.0		10.0	
TW-10-01-07-08-09:48	1386	1.0		5.0		10.0	
TW-11-01-07-08-09:17	283	1.0		5.0		10.0	
TW-13-01-07-08-10:25	502	1.0		5.0		10.0	
TW-14-01-07-08-09:55	151	1.0		5.0		10.0	
TW-17-01-07-08-09:53	142	1.0		5.0		10.0	
TW-18-01-07-08-09:42	567	1.0		5.0		10.0	
TW-19-01-07-08-09:25	840	1.0		5.0		10.0	
TW-19-01-22-08-11:45	804	1.0		5.0		10.0	
TW-19-01-31-08-08:50	821	1.0		5.0		10.0	
TW-20-01-07-08-10:15	3320	1.0		5.0		10.0	
TEMPORARY EXTRACTION WELLS							
MW-50-01-07-08-09:05	637	1.0		5.0		10.0	

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Sample Name - Date Sampled - Time Sampled	1,4-Dioxane Results (ppb)	R.L. (ppb)	Bromate Results (ppb)	R.L. (ppb)	Bromide Results (ppb)	R.L. (ppb)	Comments
TEMPORARY EXTRACTION WELLS							
SW-COMB-01-07-08-09:40	547	1.0		5.0		10.0	
RED POND							
Red Pond-01-07-08-09:35	677	1.0		5.0		10.0	
Red Pond-01-14-08-08:30	635	1.0		5.0		10.0	
Red Pond-01-21-08-08:50	626	1.0		5.0		10.0	
Red Pond-01-28-08-09:00	668	1.0		5.0		10.0	
OUTFALL001							
OUTFALL-01-01-08-	5	1.0	6	5.0		10.0	
OUTFALL-01-02-08-	5	1.0	6	5.0		10.0	
OUTFALL-01-03-08-	4	1.0	5	5.0		10.0	
OUTFALL-01-06-08-	5	1.0	5	5.0		10.0	
OUTFALL-01-07-08-	5	1.0	5	5.0		10.0	
OUTFALL-01-08-08-	4	1.0	6	5.0		10.0	
OUTFALL-01-09-08-	4	1.0	7	5.0		10.0	
OUTFALL-01-10-08-	4	1.0	6	5.0		10.0	
OUTFALL-01-13-08-	4	1.0	5	5.0		10.0	
OUTFALL-01-14-08-	4	1.0	6	5.0		10.0	
OUTFALL-01-15-08-	4	1.0	6	5.0		10.0	
OUTFALL-01-16-08-	4	1.0	6	5.0		10.0	
OUTFALL-01-17-08-	4	1.0	8	5.0		10.0	
OUTFALL-01-20-08-	4	1.0	nd	5.0		10.0	
OUTFALL-01-21-08-	4	1.0	nd	5.0		10.0	
OUTFALL-01-22-08-	4	1.0	6	5.0		10.0	
OUTFALL-01-23-08-	5	1.0	6	5.0		10.0	
OUTFALL-01-24-08-	5	1.0	6	5.0		10.0	
OUTFALL-01-27-08-	5	1.0	7	5.0		10.0	
OUTFALL-01-28-08-	5	1.0	6	5.0		10.0	
OUTFALL-01-29-08-	5	1.0	7	5.0		10.0	

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Sample Name - Date Sampled - Time Sampled	1,4-Dioxane Results (ppb)	R.L. (ppb)	Bromate Results (ppb)	R.L. (ppb)	Bromide Results (ppb)	R.L. (ppb)	Comments
OUTFALL001							
OUTFALL-01-30-08-	4	1.0	8	5.0		10.0	
OUTFALL-01-31-08-	4	1.0	7	5.0		10.0	
D0							
MW-53i-01-24-08-09:25	48	1.0		5.0		10.0	
A2 Cleaning Supply-01-03-08-13:50	101	1.0		5.0		10.0	
D2							
MW-17-01-24-08-10:40	866	1.0		5.0		10.0	
MW-38d-01-31-08-09:00	133	1.0		5.0		10.0	
MW-56s-01-18-08-11:20	126	1.0		5.0		10.0	
MW-92-01-28-08-11:00	22	1.0		5.0		10.0	
MW-113-01-28-08-11:45	19	1.0		5.0		10.0	
MW-KD-1s-01-28-08-12:10	26	1.0		5.0		10.0	
MW-KD-1d-01-28-08-12:35	155	1.0		5.0		10.0	
593 Allison-01-28-08-14:00	441	1.0		5.0		10.0	
E							
MW-30d-01-31-08-13:35	1112	1.0		5.0		10.0	
MW-71-01-31-08-12:10	1119	1.0		5.0		10.0	
MW-72s-01-18-08-09:10	36	1.0		5.0		10.0	
MW-72d-01-18-08-09:50	3124	1.0		5.0		10.0	
MW-79s-01-11-08-10:20	287	1.0		5.0		10.0	
MW-79d-01-11-08-09:45	36	1.0		5.0		10.0	
MW-81-01-08-08-10:15	442	1.0		5.0		10.0	
MW-83s-01-18-08-10:30	399	1.0		5.0		10.0	
MW-84s-01-23-08-12:55	543	1.0		5.0		10.0	
MW-84d-01-23-08-12:20	nd	1.0		5.0		10.0	
MW-85-01-08-08-11:45	1161	1.0		5.0		10.0	
MW-87s-01-11-08-14:00	12	1.0		5.0		10.0	
MW-88-01-11-08-11:05	218	1.0		5.0		10.0	

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Sample Name - Date Sampled - Time Sampled	1,4-Dioxane Results (ppb)	R.L. (ppb)	Bromate Results (ppb)	R.L. (ppb)	Bromide Results (ppb)	R.L. (ppb)	Comments
E							
MW-90-01-11-08-11:50	40	1.0		5.0		10.0	
MW-100-01-14-08-14:30	129	1.0		5.0		10.0	
MW-101-01-24-08-11:40	402	1.0		5.0		10.0	
MW-104-01-14-08-10:05	nd	1.0		5.0		10.0	
MW-105s-01-08-08-14:15	2273	1.0		5.0		10.0	
MW-105d-01-08-08-13:59	755	1.0		5.0		10.0	
MW-106s-01-24-08-14:40	1020	1.0		5.0		10.0	
MW-106d-01-24-08-14:10	1	1.0		5.0		10.0	
MW-107-01-28-08-13:05	27	1.0		5.0		10.0	
MW-110-01-14-08-10:45	26	1.0		5.0		10.0	
MW-115-01-14-08-09:15	1131	1.0		5.0		10.0	No Static due to Maple Inj off.
MW-116-01-18-08-08:25	397	1.0		5.0		10.0	
TW-15-01-07-08-13:50	134	1.0		5.0		10.0	
Maple Injection							
Maple-Inj-01-02-08-08:10	12	1.0	nd	5.0		10.0	
Maple-Inj-01-03-08-08:40	8	1.0	7	5.0		10.0	
Maple-Inj-01-04-08-09:10	12	1.0	nd	5.0		10.0	
Maple-Inj-01-07-08-09:10	12	1.0	6	5.0		10.0	
Maple-Inj-01-08-08-08:05	10	1.0	6	5.0		10.0	
Maple-Inj-01-09-08-07:30	12	1.0	nd	5.0		10.0	
Maple-Inj-01-10-08-08:10	13	1.0	nd	5.0		10.0	
Maple-Inj-01-10-08-12:45	11	1.0	7	5.0		10.0	
Maple-Inj-01-11-08-07:50	13	1.0	nd	5.0		10.0	
Maple-Inj-01-22-08-11:55	10	1.0	6	5.0		10.0	
Maple-Inj-01-23-08-07:40	12	1.0	nd	5.0		10.0	
Maple-Inj-01-31-08-08:45	9	1.0	14	5.0		10.0	
Maple-Inj-01-31-08-12:50	12	1.0	5	5.0		10.0	
None							

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Sample Name - Date Sampled - Time Sampled	1,4-Dioxane Results (ppb)	R.L. (ppb)	Bromate Results (ppb)	R.L. (ppb)	Bromide Results (ppb)	R.L. (ppb)	Comments
None							
HC/HR-01-02-08-09:45		1.0	nd	2.0		10.0	
HC/HR-01-03-08-09:45		1.0	nd	2.0		10.0	
HC/HR-01-04-08-09:45		1.0	nd	2.0		10.0	
HC/HR-01-07-08-07:50		1.0	nd	2.0		10.0	
HC/HR-01-08-08-08:30		1.0	nd	2.0		10.0	
HC/HR-01-09-08-09:30		1.0	nd	2.0		10.0	
HC/HR-01-10-08-07:20		1.0	nd	2.0		10.0	
HC/HR-01-11-08-08:00		1.0	nd	2.0		10.0	
HC/HR-01-14-08-08:10		1.0	nd	2.0		10.0	
HC/HR-01-15-08-08:35		1.0	nd	2.0		10.0	
HC/HR-01-16-08-09:00		1.0	nd	2.0		10.0	
HC/HR-01-17-08-09:30		1.0	nd	2.0		10.0	
HC/HR-01-18-08-07:30		1.0	nd	2.0		10.0	
HC/HR-01-21-08-08:00		1.0	nd	2.0		10.0	
HC/HR-01-22-08-09:00		1.0	nd	2.0		10.0	
HC/HR-01-23-08-07:40		1.0	nd	2.0		10.0	
HC/HR-01-24-08-08:00		1.0	nd	2.0		10.0	
HC/HR-01-25-08-07:45		1.0	nd	2.0		10.0	
HC/HR-01-28-08-08:05		1.0	nd	2.0		10.0	
HC/HR-01-29-08-07:40		1.0	nd	2.0		10.0	
HC/HR-01-30-08-07:50		1.0	nd	2.0		10.0	
HC/HR-01-31-08-07:45		1.0	nd	2.0		10.0	

nd=Not detected at or above the Reporting Limit (R.L.)

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1,4-Dioxane Precision and Accuracy Control Charting

Analysis Date	*Method Blank*	*CVS True Value*	*CVS Result*	*CVS % Recovery*	*LFB True Value:*	*LFB Result:*	*LFB % Recovery:*	*Sample Result:*	*MS/MSD True Value:*	*MS Result:*	*MSD Result:*	*MS % Recovery:*	*MSD % Recovery:*	*MS/MSD Mean:*	*MS/MSD RSD:*	*MS/MSD RPD:*
1/2/2008	0	10.00	10.08	100.8%	10.00	10.51	105.1	4.70	10.00	15.23	15.58	105.3	108.8	15.41	1.61	2.27%
1/4/2008	0	10.00	10.08	100.8%	10.00	9.83	98.3	7.97	10.00	18.90	18.89	109.3	109.2	18.90	0.04	0.05%
1/7/2008	0	10.00	9.83	98.3%	10.00	9.97	99.7	12.57	10.00	22.99	25.46	104.2	**128.9**	24.23	7.21	10.20%
	0	10.00	9.94	99.4%	10.00	10.13	101.3		10.00							
1/8/2008	0	10.00	10.21	102.1%	10.00	10.01	100.1	10.50	10.00	19.53	20.07	90.3	95.7	19.80	1.93	2.73%
1/9/2008	0	10.00	9.93	99.3%	10.00	10.13	101.3	12.07	10.00	22.89	22.18	108.2	101.1	22.54	2.23	3.15%
1/10/2008	0	10.00	10.19	101.9%	10.00	9.72	97.2	12.84	10.00	22.18	22.03	93.4	91.9	22.11	0.48	0.68%
1/11/2008	0	10.00	9.53	95.3%	10.00	9.60	96	13.33	10.00	23.16	23.49	98.3	101.6	23.33	1.00	1.41%
1/15/2008	0	10.00	9.68	96.8%	10.00	9.66	96.6	4.30	10.00	14.84	14.72	105.4	104.2	14.78	0.57	0.81%
1/16/2008	0	10.00	9.72	97.2%	10.00	9.77	97.7		10.00							
1/17/2008	0	10.00	9.52	95.2%	10.00	9.46	94.6		10.00							
1/18/2008	0	10.00	9.65	96.5%	10.00			9.30	10.00							
	0	10.00			10.00	9.62	96.2		10.00							
1/21/2008	0	10.00	8.12	81.2%	10.00	8.31	83.1		10.00							
1/22/2008	0	10.00	9.48	94.8%	10.00	9.33	93.3	9.72	10.00	20.27	20.31	105.5	105.9	20.29	0.14	0.20%
1/23/2008	0	10.00	9.45	94.5%	10.00	9.42	94.2	12.45	10.00	22.31	21.78	98.6	93.3	22.05	1.70	2.40%
1/24/2008	0	10.00	9.95	99.5%	10.00	9.93	99.3		10.00							
1/25/2008	0	10.00	10.21	102.1%	10.00	9.75	97.5	4.75	10.00	15.74	15.44	109.9	106.9	15.59	1.36	1.92%
1/28/2008	0	10.00	9.91	99.1%	10.00	10.00	100	5.02	10.00	14.86	15.35	98.4	103.3	15.11	2.29	3.24%
1/29/2008	0	10.00	10.07	100.7%	10.00	10.01	100.1	5.04	10.00	14.88	16.67	98.4	116.3	15.78	8.02	11.35%
1/30/2008	0	10.00	9.85	98.5%	10.00	9.20	92	4.76	10.00	14.92	15.43	101.6	106.7	15.18	2.38	3.36%
1/31/2008	0	10.00	9.83	98.3%	10.00	9.60	96	8.68	10.00	18.90	19.08	102.2	104	18.99	0.67	0.95%

CVS Mean: 9.77 CVS Standard Dev: 0.45 3 Standard Dev.: 1.34 Lower Control Limit: 8.43 Upper Control Limit: 11.12

February 06, 2008

Wendy Schultz
Pall Life Sciences
600 South Wagner Road
Ann Arbor, MI 48103-9019

Tel: (734) 913-6598
Fax: (734) 913-6427

Re: Oxalic Acid Analysis-January 2008

Work Order : **0801499**

Dear Wendy,

e-Lab Analytical, Inc received 1 sample on 1/29/2008 10:00 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by e-Lab Analytical, Inc. and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from e-Lab Analytical, Inc. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 6.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Ann Preston

Electronically approved by: Ann Preston

Ann Preston
Project Manager

Certificate No: IL100452

e-Lab Analytical, Inc

Date: February 06, 2008

Client: Pall Life Sciences
Project: Oxalic Acid Analysis-January 2008
Work Order: **0801499**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
0801499-01	Outfall 001-01-23-08	Water		1/24/2008	1/29/2008 10:00	☐

e-Lab Analytical, Inc

Date: *February 06, 2008*

CLIENT: Pall Life Sciences
Project: Oxalic Acid Analysis-January 2008
Work Order: 0801499

Lab ID: 0801499-01A
Client Sample ID: Outfall 001-01-23-08
Collection Date: 1/24/2008
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
ORGANIC ACIDS BY HPLC			**HPLC**			Analyst: **JD**
Oxalic acid	ND		150	µg/L	1	2/5/2008

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
P - Dual Column results RPD > 40%
E - Value above quantitation range
H - Analyzed outside of Hold Time

e-Lab Analytical, Inc

CLIENT: Pall Life Sciences
Work Order: 0801499
Project: Oxalic Acid Analysis-January 2008

Date: *Feb 06 2008*

QC BATCH REPORT

Batch ID: **R56186** Instrument ID **HPLC1** Method: **HPLC**

MBLK Sample ID: **MB-R56186** Units: **mg/L** Analysis Date: **02/05/08 0:00**
Client ID: Run ID: **HPLC1_080205A** SeqNo: **924344** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oxalic acid	ND	0.15								

LCS Sample ID: **LCS-R56186** Units: **mg/L** Analysis Date: **02/05/08 0:00**
Client ID: Run ID: **HPLC1_080205A** SeqNo: **924345** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oxalic acid	480.2	0.15	500	0	96	80-120	0			

LCSD Sample ID: **LCSD-R56186** Units: **mg/L** Analysis Date: **02/05/08 0:00**
Client ID: Run ID: **HPLC1_080205A** SeqNo: **924349** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oxalic acid	478.6	0.15	500	0	95.7	80-120	480.2	0.33	20	

MS Sample ID: **0801499-01A MS** Units: **mg/L** Analysis Date: **02/05/08 0:00**
Client ID: **Outfall 001-01-23-08** Run ID: **HPLC1_080205A** SeqNo: **924347** Prep Date: DF: **2**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oxalic acid	778.2	0.30	1000	0	77.8	45-85	0			

MSD Sample ID: **0801499-01A MSD** Units: **mg/L** Analysis Date: **02/05/08 0:00**
Client ID: **Outfall 001-01-23-08** Run ID: **HPLC1_080205A** SeqNo: **924348** Prep Date: DF: **2**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Oxalic acid	769	0.30	1000	0	76.9	45-85	778.2	1.2	20	

The following samples were analyzed in this batch: 0801499-01A

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
O - Referenced analyte value is > 4 times amount spiked
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
P - Dual Column results percent difference > 40%
B - Analyte detected in assoc. Method Blank
U - Analyzed for but not detected
E - Value above quantitation range

0001499

PALL Life Sciences

Environmental Laboratory Services
600 South Wagner Rd. Ann Arbor, MI 48103-9019
Phone: (734)-913-6598 * Fax: (734)-913-6427

Chain of Custody Record

Company Pall Corporation
Name Wendy Schultz
Street 600 S Wagner Rd
City Ann Arbor State MI Zip 48103
Phone (734) 913-6598 Fax

Required Completion Date: / / Fax the Report: Yes / No
Requested Turnaround: (Standard *) 4 business days * 48 hours
24 hours * 3 business days * ASAP/Same day
Project Name / Number:
Print Sampler Name: Robert Ursing

	Sample Identification or Location (This will appear on the final report)	Sample Date	Sample Time	Water Matrix: Drinking	Ground	Surface	Waste	Number of Containers	Requested Testing	Preservation: None	4 °C	HCl	HNO_3	H_2SO_4	Other	Lab ID
1	Outfall001-01-23-08	01/24/08	:		X			1	oxalic acid	X						
2		/ /	:													
3		/ /	:													
4		/ /	:													
5		/ /	:													
6		/ /	:													
7		/ /	:													
8		/ /	:													
9		/ /	:													
10		/ /	:													
11		/ /	:													
12		/ /	:													
13		/ /	:													
14		/ /	:													
15		/ /	:													

Released by: Jessica Reade	Date: 1/28/08	Time: 12:30	Received by:	Date: 1/29/8	Time: 10:00
Released by:	Date: / /	Time: :	Received by:	Date: / /	Time: :

PINK Copy – Sampler

WHITE copy and YELLOW copy – Forward to laboratory with samples.

Sample temperature upon laboratory receipt _____°C

e-Lab Analytical, Inc

Sample Receipt Checklist

Client Name PALL

Date/Time Received: 1/29/2008 10:00:00 AM

Work Order Number 0801499

Received by: ARB

Checklist completed by _____ Signature 1/29/08 Date

Reviewed by _____ Initials 1/30/08 Date

Matrix:

Carrier name: UPS

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	0.6 C		
Cooler(s)/Kit(s):			
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐

Adjusted? No Checked by _____

Login Notes:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____