Loadlist-Alcohol Reference Solution Verification

Location	Sample
1	Volatiles Mix
2	Blank
3	Cerilliant 25
4	Cerilliant 100
5	Cerilliant 200
6	Cerilliant 400
7	Blank
8	Cerilliant 50
9	439
10	440
11	442
12	443
13	444
14	451
15	453
16	454
17	455
18	456
19	Sigma-Aldrich 100
20	439
21	440
22	442
23	443
24	444
25	451
26	453
27	454
28	455
29	456
30	Cerilliant 300

Instrument Parameters			
Sample Temp	60	C	✓
Needle Temp	70	C	✓
Transfer Temp	80	C	✓
Thermostat time	15	min	✓
Pressurization time	2.0	min	✓
Withdraw time	0.2	min	✓
Injection Time	0.03	min	✓
Cycle Time	4.5	min	✓
Inlet temp	90	C	✓
He Carrier pressure	15	psi	✓
Column oven temp	55	C	✓
Run Time	5.0	min	✓
FID Temp	220	C	✓
Hydrogen Flow	45	mL/min	✓
Air Flow	450	mL/min	✓

Procedure Used	Eff. Date
ATP-SOP section 2.14	May-17

Reagents, Calibrators and Controls

Materials	Lot	Exp. Date
Internal Standard	080117 TG	na
Volatiles Mixture	041513 DKR	na
Water (Fisher Scientific)	167428	11/2021
Cerilliant 25	FN06221502	8/2020
Cerilliant 100	FN08101601	8/2021
Cerilliant 200	FN03301601	4/2021
Cerilliant 400	FN11191402	2/2020
Cerilliant 50	FN04271601	6/2021
Sigma-Aldrich 100 (33961)	SZBE029XV	1/29/2019
Cerilliant 300	FN02121601	2/2021

Reference Solution

Level Tested:	0.08 g/210 L
Lot #:	201707E
Manufacture Date:	7/25/2017
Expiration Date	7/25/2019

Operator: JJ Graham

Date: 8/4/17

Alcohol Analysis QC Summary

Report Date	8/4/2017
Reviewer	TJ Graham

JG 8/4/17

Run Summary Data				Ethanol			n-Propanol	
Run Date	Channel	Sample	Lot	RT	Area	Conc.	RT	Area
8/4/2017	A	Vols Mix	041513 DKR	1.413	22829.30	0.0378	2.006	210333.81
8/4/2017	A	Blank	167428		0.00	0.0000	2.007	213974.11
8/4/2017	A	CER 025	FN06221502	1.413	15335.94	0.0251	2.006	211934.52
8/4/2017	A	CER 100	FN08101601	1.413	60635.17	0.0993	2.007	211456.68
8/4/2017	A	CER 200	FN03301601	1.412	122295.47	0.1998	2.006	212436.94
8/4/2017	A	CER 400	FN11191402	1.412	239373.59	0.4004	2.006	206645.92
8/4/2017	A	Blank	167428		0.00	0.0000	2.006	208429.92
8/4/2017	A	Cerilliant 50	FN04271601	1.412	29820.08	0.0497	2.006	209733.21
8/4/2017	A	439	201707E	1.412	58954.79	0.0982	2.006	208643.98
8/4/2017	A	440	201707E	1.412	59229.20	0.0993	2.006	207314.47
8/4/2017	A	442	201707E	1.413	59058.22	0.0981	2.007	209186.34
8/4/2017	A	443	201707E	1.412	59580.75	0.0983	2.006	210630.81
8/4/2017	A	444	201707E	1.413	58976.75	0.0978	2.007	209556.06
8/4/2017	A	451	201707E	1.413	59847.73	0.0991	2.007	209816.14
8/4/2017	A	453	201707E	1.412	58906.21	0.0976	2.006	209639.31
8/4/2017	A	454	201707E	1.413	59271.83	0.0981	2.006	210045.88
8/4/2017	A	455	201707E	1.412	58989.55	0.0989	2.006	207327.51
8/4/2017	A	456	201707E	1.413	58741.28	0.1001	2.006	203917.83
8/4/2017	A	Sigma-Aldrich 100	SZBE029XV	1.412	58418.36	0.0972	2.006	208962.11
8/4/2017	A	439	201707E	1.412	59473.30	0.0989	2.006	208986.16
8/4/2017	A	440	201707E	1.413	59628.52	0.0988	2.006	209726.96
8/4/2017	A	442	201707E	1.413	58962.46	0.0984	2.006	208211.29
8/4/2017	A	443	201707E	1.412	59315.03	0.0986	2.006	208947.46
8/4/2017	A	444	201707E	1.412	58558.30	0.0972	2.006	209394.13
8/4/2017	A	451	201707E	1.413	59065.07	0.0988	2.006	207802.24
8/4/2017	A	453	201707E	1.412	59099.19	0.0984	2.006	208708.79
8/4/2017	A	454	201707E	1.413	59085.77	0.0982	2.006	209168.44
8/4/2017	A	455	201707E	1.413	60278.80	0.0977	2.006	214341.60
8/4/2017	A	456	201707E	1.413	60907.99	0.0989	2.006	214048.04
8/4/2017	A	Cerilliant 300	FN02121601	1.412	184214.64	0.2987	2.006	213317.32
							%CV =	1.10%

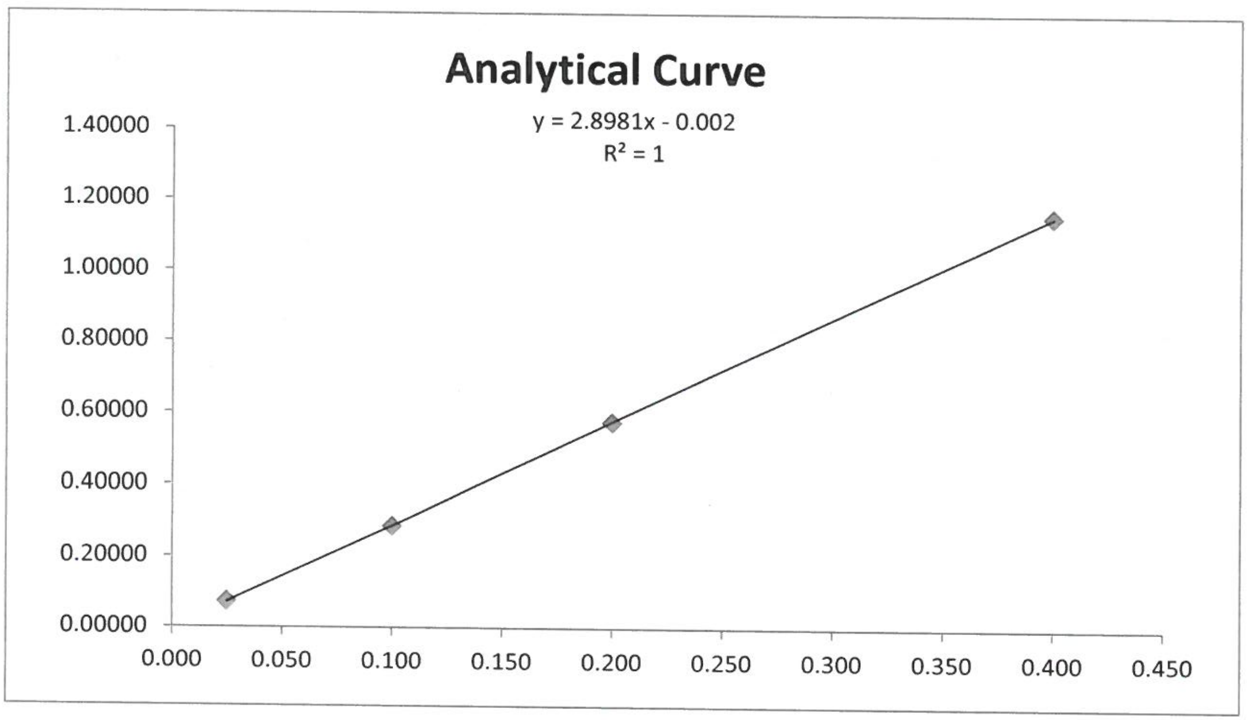
ALCOHOL ANALYSIS QC SUMMARY

Report Date	8/4/2017
Reviewer	TJ Graham

JG
8/4/17

RUN SUMMARY DATA				**Ethanol**			**n-Propanol**	
Run Date	**Channel**	**Sample**	**Lot**	**RT**	**Area**	**Conc.**	**RT**	**Area**
8/4/2017	A	CER 025	FN06221502	1.413	15335.94	0.0251	2.006	211934.52
8/4/2017	A	CER 100	FN08101601	1.413	60635.17	0.0993	2.007	211456.68
8/4/2017	A	CER 200	FN03301601	1.412	122295.47	0.1998	2.006	212436.94
8/4/2017	A	CER 400	FN11191402	1.412	239373.59	0.4004	2.006	206645.92

Summary		**Standard**	**g/dL**	**Ratio**	**Calc.**	**Diff**
		Blank	0.000	0.00000	0.00000	0.00000
Slope	2.8981	CER 025	0.025	0.07236	0.02565	0.00065
Intercept	-0.0020	CER 100	0.100	0.28675	0.09963	-0.00037
Standard Error	0.002216505	CER 200	0.200	0.57568	0.19933	-0.00067
R-Squared	1.0000	CER 400	0.400	1.15838	0.40039	0.00039



Source:	Alcohol Countermeasure Systems, Inc.

Lot	201707E
Level	0.08 g/210 L
Manufacture Date	7/25/2017
Expiration Date	7/25/2019

JD
8/4/17

Bottle	Result (g/100mL)
439	0.0982
	0.0989
440	0.0993
	0.0988
442	0.0981
	0.0984
443	0.0983
	0.0986
444	0.0978
	0.0972
451	0.0991
	0.0988
453	0.0976
	0.0984
454	0.0981
	0.0982
455	0.0989
	0.0977
456	0.1001
	0.0989

Mean	0.0985
Std. Dev.	0.0007
Min	0.0972
Max	0.1001

Loadlist-Alcohol Reference Solution Verification

Re-Analysis JO 8/4/17

Location	Sample
1	Volatiles Mix
2	Blank
3	Cerilliant 25
4	Cerilliant 100
5	Cerilliant 200
6	Cerilliant 400
7	Blank
8	Cerilliant 50
9	439
10	440
11	442
12	443
13	444
14	451
15	453
16	454
17	455
18	456
19	Sigma-Aldrich 100
20	439
21	440
22	442
23	443
24	444
25	451
26	453
27	454
28	455
29	456
30	Cerilliant 300

Instrument Parameters			
Sample Temp	60	C	✓
Needle Temp	70	C	✓
Transfer Temp	80	C	✓
Thermostat time	15	min	✓
Pressurization time	2.0	min	✓
Withdraw time	0.2	min	✓
Injection Time	0.03	min	✓
Cycle Time	4.5	min	✓
Inlet temp	90	C	✓
He Carrier pressure	15	psi	✓
Column oven temp	55	C	✓
Run Time	5.0	min	✓
FID Temp	220	C	✓
Hydrogen Flow	45	mL/min	✓
Air Flow	450	mL/min	✓

Procedure Used	Eff. Date
ATP-SOP section 2.14	May-17

Reagents, Calibrators and Controls

Materials	Lot	Exp. Date
Internal Standard	080117 TG	na
Volatiles Mixture	041513 DKR	na
Water (Fisher Scientific)	167428	11/2021
Cerilliant 25	FN06221502	8/2020
Cerilliant 100	FN08101601	8/2021
Cerilliant 200	FN03301601	4/2021
Cerilliant 400	FN11191402	2/2020
Cerilliant 50	FN04271601	6/2021
Sigma-Aldrich 100 (33961)	SZBE029XV	1/29/2019
Cerilliant 300	FN02121601	2/2021

Reference Solution

Level Tested:	0.08 g/210 L
Lot #:	201707E
Manufacture Date:	7/25/2017
Expiration Date	7/25/2019

Operator: JJ Graham

Date: 8/4/17

Alcohol Analysis QC Summary

Report Date	8/4/2017
Reviewer	TJ Graham

8/4/17
JG
Re-Analysis

Run Summary Data				Ethanol			n-Propanol	
Run Date	Channel	Sample	Lot	RT	Area	Conc.	RT	Area
8/4/2017	A	Vols Mix	041513 DKR	1.412	23169.84	0.0387	2.006	210068.44
8/4/2017	A	Blank	167428		0.00	0.0000	2.006	207118.63
8/4/2017	A	CER 025	FN06221502	1.413	15062.50	0.0257	2.006	206917.75
8/4/2017	A	CER 100	FN08101601	1.412	60266.83	0.1000	2.006	208851.76
8/4/2017	A	CER 200	FN03301601	1.412	120631.91	0.2003	2.006	207938.23
8/4/2017	A	CER 400	FN11191402	1.412	240137.99	0.4003	2.006	206000.44
8/4/2017	A	Blank	167428		0.00	0.0000	2.006	206333.23
8/4/2017	A	Cerilliant 50	FN04271601	1.412	30021.06	0.0496	2.006	210092.82
8/4/2017	A	439	201707E	1.412	59317.57	0.0982	2.006	208437.16
8/4/2017	A	440	201707E	1.412	59642.47	0.0983	2.006	209271.19
8/4/2017	A	442	201707E	1.413	59540.66	0.0987	2.006	208063.99
8/4/2017	A	443	201707E	1.413	59398.56	0.0976	2.006	210108.79
8/4/2017	A	444	201707E	1.412	59528.81	0.0984	2.006	208839.38
8/4/2017	A	451	201707E	1.412	59686.25	0.0985	2.006	209061.76
8/4/2017	A	453	201707E	1.412	59389.18	0.0975	2.006	210132.51
8/4/2017	A	454	201707E	1.412	59336.78	0.0979	2.006	209253.85
8/4/2017	A	455	201707E	1.412	59120.48	0.0981	2.006	208007.89
8/4/2017	A	456	201707E	1.412	58888.61	0.0979	2.006	207670.51
8/4/2017	A	Sigma-Aldrich 100	SZBE029XV	1.412	58559.64	0.0974	2.006	207556.02
8/4/2017	A	439	201707E	1.412	59185.53	0.0979	2.006	208572.13
8/4/2017	A	440	201707E	1.412	59313.15	0.0986	2.006	207516.95
8/4/2017	A	442	201707E	1.413	59039.35	0.0975	2.006	209034.19
8/4/2017	A	443	201707E	1.413	60220.92	0.0976	2.006	213009.66
8/4/2017	A	444	201707E	1.412	59574.02	0.0981	2.006	209639.60
8/4/2017	A	451	201707E	1.413	59087.48	0.0979	2.006	208336.27
8/4/2017	A	453	201707E	1.412	59732.47	0.0983	2.006	209651.61
8/4/2017	A	454	201707E	1.413	59376.14	0.0985	2.006	208043.25
8/4/2017	A	455	201707E	1.413	60257.69	0.0979	2.006	212456.83
8/4/2017	A	456	201707E	1.413	61100.14	0.0984	2.007	214197.22
8/4/2017	A	Cerilliant 300	FN02121601	1.413	185435.69	0.2991	2.007	213047.28
							%CV =	0.94%

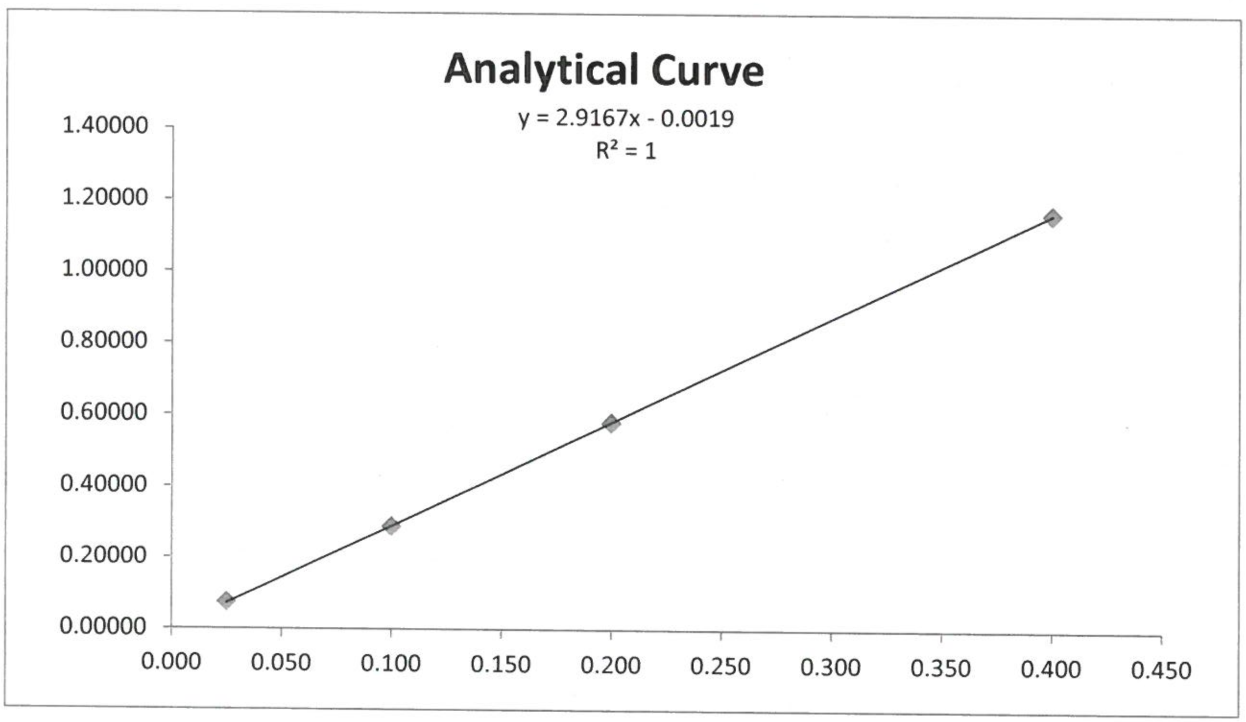
ALCOHOL ANALYSIS QC SUMMARY

8/4/17
JD
Re-Analysis

Report Date	8/4/2017
Reviewer	TJ Graham

RUN SUMMARY DATA				Ethanol			n-Propanol	
Run Date	Channel	Sample	Lot	RT	Area	Conc.	RT	Area
8/4/2017	A	CER 025	FN06221502	1.413	15062.50	0.0257	2.006	206917.75
8/4/2017	A	CER 100	FN08101601	1.412	60266.83	0.1000	2.006	208851.76
8/4/2017	A	CER 200	FN03301601	1.412	120631.91	0.2003	2.006	207938.23
8/4/2017	A	CER 400	FN11191402	1.412	240137.99	0.4003	2.006	206000.44

Summary		Standard	g/dL	Ratio	Calc.	Diff
		Blank	0.000	0.00000	0.00000	0.00000
Slope	2.9167	CER 025	0.025	0.07279	0.02559	0.00059
Intercept	-0.0019	CER 100	0.100	0.28856	0.09957	-0.00043
Standard Error	0.001895911	CER 200	0.200	0.58013	0.19953	-0.00047
R-Squared	1.0000	CER 400	0.400	1.16572	0.40030	0.00030



Source:	Alcohol Countermeasure Systems, Inc.

Lot	201707E
Level	0.08 g/210 L
Manufacture Date	7/25/2017
Expiration Date	7/25/2019

Re-Analysis JD 8/4/17

Bottle	Result (g/100mL)
439	0.0982
	0.0979
440	0.0983
	0.0986
442	0.0987
	0.0975
443	0.0976
	0.0976
444	0.0984
	0.0981
451	0.0985
	0.0979
453	0.0975
	0.0983
454	0.0979
	0.0985
455	0.0981
	0.0979
456	0.0979
	0.0984

Mean	0.0981
Std. Dev.	0.0004
Min	0.0975
Max	0.0987

8/4/17
JD