

Loadlist-Alcohol Reference Solution Verification

Location	Sample
1	Volatiles Mix
2	Blank
3	Cerilliant 025
4	Cerilliant 100
5	Cerilliant 200
6	Cerilliant 400
7	Cerilliant 50
8	1586
9	1578
10	857
11	858
12	856
13	1522
14	763
15	761
16	762
17	759
18	Cerilliant 100
19	1586
20	1578
21	857
22	858
23	856
24	1522
25	763
26	761
27	762
28	759
29	Cerilliant 300
30	
31	
32	
33	
34	
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36	
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39	
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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	0.1	min	✓
Injection Time	0.03	min	✓
Cycle Time	4.5	min	✓
inlet temp	90	C	✓
Carrier pressure	15	psi	✓
Column oven temp	55	C	✓
Run Time	5.0	min	✓
FID Temp	200	C	✓
Hydrogen Flow	45	mL/min	✓
Air Flow	450	mL/min	✓
Nitrogen Flow	15	mL/min	✓

Helium
10/17/16
BR

Reagents, Calibrators and Controls

Materials	Lot	Exp. Date
Internal Standard	03032014bhk	na
Volatiles Mixture	041513dkr	na
Cerilliant 025	FN032210-01	04/2015
Cerilliant 100	FN050312-01	05/2017
Cerilliant 200	FN032712-01	03/2017
Cerilliant 400	FN012712-01	01/2017
Cerilliant 50	FN010112-01	01/2017
Cerilliant 100*	FN050312-01	05/2017
Cerilliant 300	FN09061305	10/2018

*separate ampule

Reference Solution

Level Tested:	0.050 g/210L
Lot #:	201403F
Manufacture Date:	3/25/2014
Expiration Date	3/25/2016

Operator: BR

Date: 5/12/14

Alcohol Analysis QC Summary

Report Date

5/12/2014

Reviewer

Brett Kirkland

Run Summary Data		Ethanol			n-Propanol			
Run Date	Channel	Sample	Lot	RT	Area	Conc.	RT	Area
5/12/2014	A	Vol's Mix	041513dkr	1.421	16203.98	0.042	2.019	273614.75
5/12/2014	A	Blank		0.000	0.00	0.000	2.019	279619.16
5/12/2014	A	CER 025	FN032210-01	1.421	10332.40	0.026	2.019	278680.90
5/12/2014	A	CER 100	FN050312-01	1.421	40498.82	0.102	2.019	270745.08
5/12/2014	A	CER 200	FN032712-01	1.421	80155.28	0.205	2.019	267134.27
5/12/2014	A	CER 400	FN012712-01	1.420	162334.79	0.400	2.019	269655.94
5/12/2014	A	Cerilliant 50	FN010112-01	1.396	20209.50	0.050	1.996	269622.75
5/12/2014	A	1586	201403F	1.396	24247.87	0.060	1.996	268782.97
5/12/2014	A	1578	201403F	1.421	24523.44	0.061	2.019	271703.09
5/12/2014	A	857	201403F	1.421	24370.36	0.061	2.019	269916.99
5/12/2014	A	858	201403F	1.421	24581.03	0.060	2.019	272620.87
5/12/2014	A	856	201403F	1.393	24437.58	0.060	1.994	271466.10
5/12/2014	A	1522	201403F	1.421	24309.33	0.060	2.019	269817.75
5/12/2014	A	763	201403F	1.421	24469.61	0.060	2.018	271296.61
5/12/2014	A	761	201403F	1.421	24562.37	0.060	2.018	272301.23
5/12/2014	A	762	201403F	1.421	24351.25	0.060	2.019	270979.39
5/12/2014	A	759	201403F	1.421	24215.22	0.060	2.019	268480.18
5/12/2014	A	Cerilliant 100	FN050312-01	1.421	40734.86	0.100	2.019	272629.63
5/12/2014	A	1586	201403F	1.421	24350.63	0.061	2.019	268842.00
5/12/2014	A	1578	201403F	1.421	24276.98	0.060	2.019	269401.16
5/12/2014	A	857	201403F	1.421	24083.18	0.060	2.019	267518.69
5/12/2014	A	858	201403F	1.421	24488.56	0.061	2.019	271213.50
5/12/2014	A	856	201403F	1.422	24081.90	0.060	2.020	266992.88
5/12/2014	A	1522	201403F	1.421	24376.96	0.061	2.019	269706.50
5/12/2014	A	763	201403F	1.396	24414.97	0.060	1.996	272021.22
5/12/2014	A	761	201403F	1.421	24316.80	0.060	2.019	269579.27
5/12/2014	A	762	201403F	1.396	24423.66	0.060	1.996	271258.79
5/12/2014	A	759	201403F	1.421	24741.78	0.060	2.019	275435.60
5/12/2014	A	Cerilliant 300	FN09061305	1.421	123756.32	0.298	2.019	276178.93

amended 5/6/16

BSK

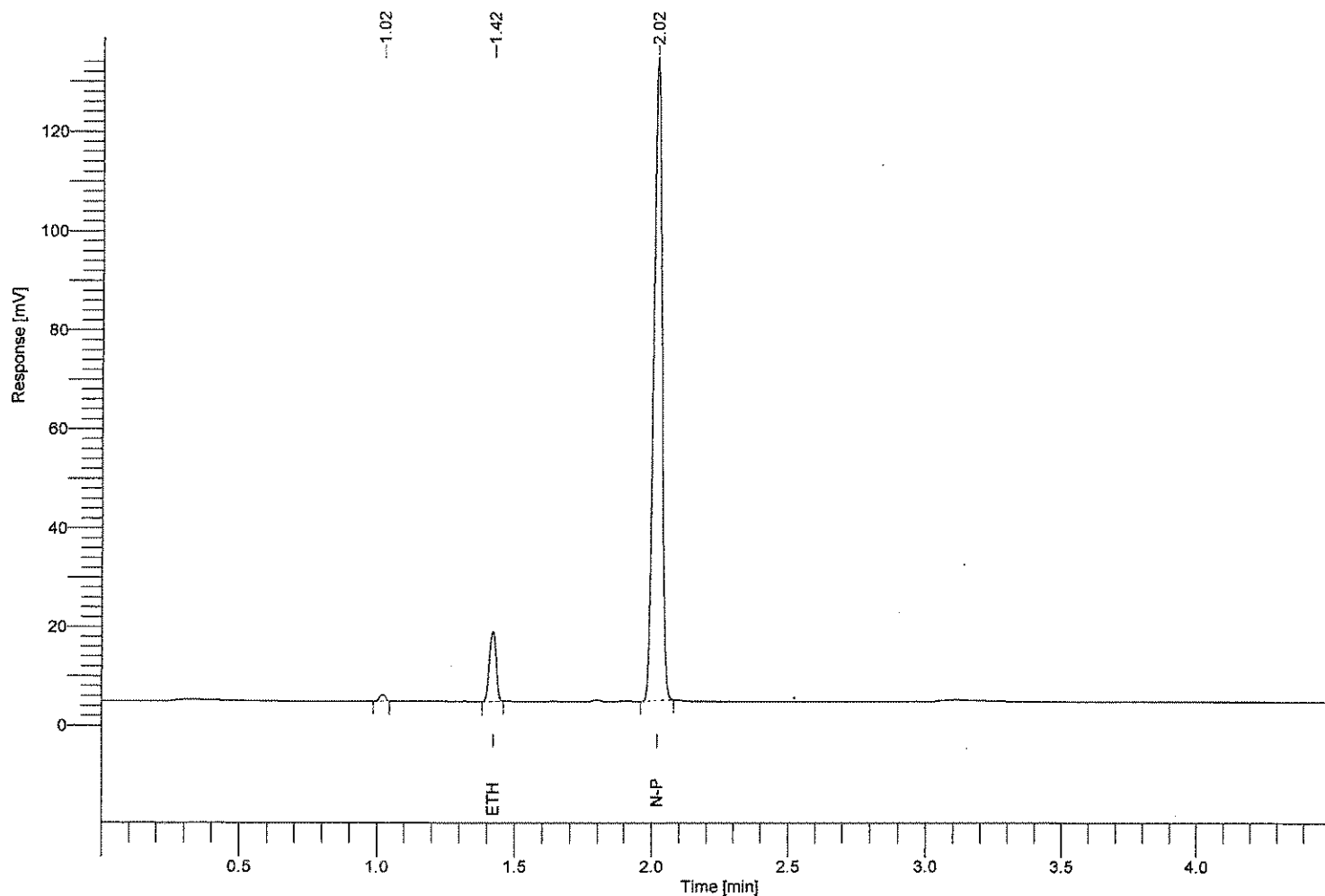
Amended due to a typo. The relevant chromatogram has been attached.

Software Version : 6.3.2.0646
 Reprocess Number : gc-pc: 686
 Sample Name : 50
 Instrument Name : ClarusGC
 Rack/Vial : 0/0
 Sample Amount : 1.000000
 Cycle : 17

Date : 5/12/2014 2:09:04 PM
 Data Acquisition Time : 5/12/2014 2:04:21 PM
 Channel : A
 Operator : manager
 Dilution Factor : 1.000000

Result File : c:\totalchrom data\05122014\0759.rst

Sequence File : C:\Totalchrom Sequences\2013\acs validation05122014bhk.seq



Component Name	Time [min]	RRt	Area [uV*sec]	Conc. g/100ml
methanol	1.220	-----	0.00	0.000
ethanol	1.421	0.704	24215.22	0.060
isopropanol	1.640	-----	0.00	0.000
acetone	1.910	-----	0.00	0.000
n-propanol	2.019	1.000	268480.18	-----

BK

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Carrier pressure	15	psi	✓
Column oven temp	55	C	✓
Run Time	5.0	min	✓
FID Temp	200	C	✓
Hydrogen Flow	45	mL/min	✓
Air Flow	450	mL/min	✓
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Reagents, Calibrators and Controls

Materials	Lot	Exp. Date
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Reference Solution

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Lot #:	201403F
Manufacture Date:	3/25/2014
Expiration Date	3/25/2016

Operator: BR

Date: 5/12/14

Alcohol Analysis QC Summary

Report Date

5/12/2014

Reviewer

Brett Kirkland



Run Summary Data				Ethanol			n-Propanol	
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5/12/2014	A	CER 200	FN032712-01	1.421	80155.28	0.205	2.019	267134.27
5/12/2014	A	CER 400	FN012712-01	1.420	162334.79	0.400	2.019	269655.94
5/12/2014	A	Cerilliant 50	FN010112-01	1.396	20209.50	0.050	1.996	269622.75
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5/12/2014	A	1578	201403F	1.421	24523.44	0.061	2.019	271703.09
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5/12/2014	A	759	201403F	1.421	24741.78	0.060	2.019	275435.60
5/12/2014	A	Cerilliant 300	FN09061305	1.421	123756.32	0.298	2.019	276178.93

ALCOHOL ANALYSIS QC SUMMARY

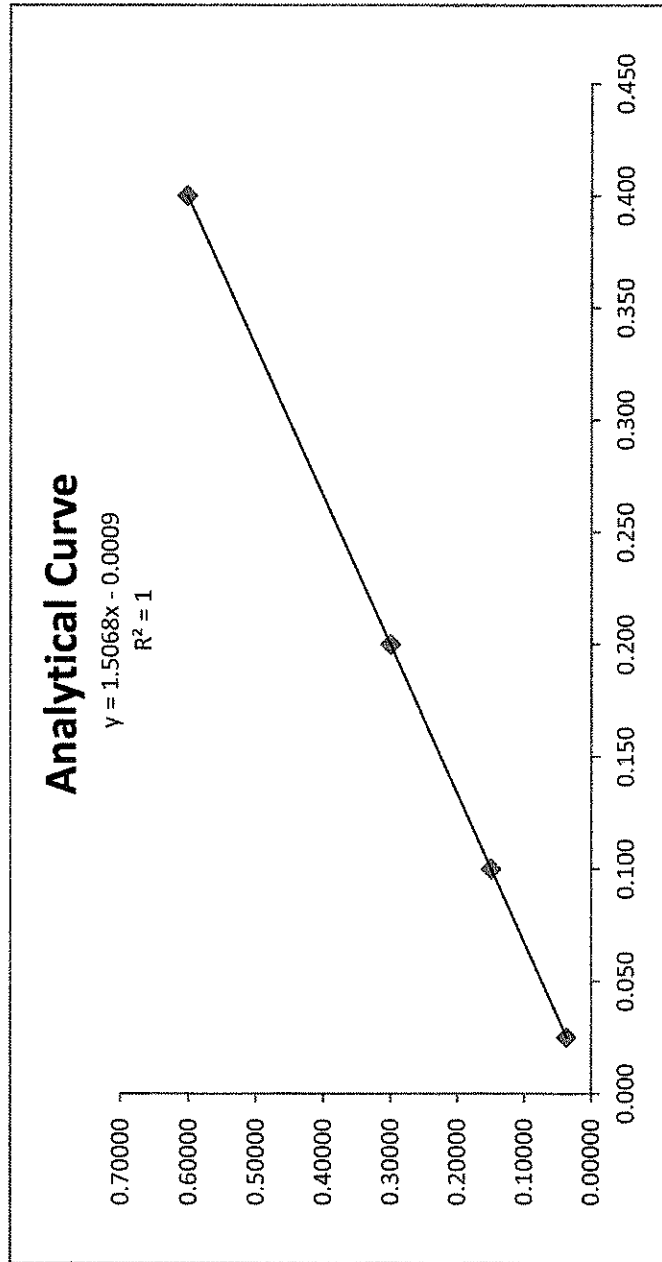
Report Date	5/12/2014
Reviewer	Brett Kirkland

201403F
 Connection
 BK 4/13/15

RUN SUMMARY DATA

Run Date	Channel	Sample	Lot	Ethanol			n-Propanol		
				RT	Area	Conc.	RT	Area	Conc.
5/12/2014	A	CER 025	FN032210-01	1.421	10332.40	0.026	2.019	278680.90	0.00000
5/12/2014	A	CER 100	FN050312-01	1.421	40498.82	0.102	2.019	270745.08	0.00022
5/12/2014	A	CER 200	FN032712-01	1.421	80155.28	0.205	2.019	267134.27	-0.00011
5/12/2014	A	CER 400	FN012712-01	1.420	162334.79	0.400	2.019	269655.94	-0.00025

Summary	Standard	g/dL	Ratio	Calc.	Diff
	Blank	0.000	0.00000	0.00000	0.00000
Slope	1.5068	0.025	0.03708	0.02522	0.00022
Intercept	-0.0009	0.100	0.14958	0.09989	-0.00011
Standard Error	0.000404803	0.200	0.30006	0.19975	-0.00025
R-Squared	1.0000	0.400	0.60201	0.40014	0.00014



Source:	Alcohol Countermeasure Systems, Inc.
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Lot	201403F
Level	0.050 g/210L
Manufacture Date	3/25/2014
Expiration Date	3/25/2016

BK

Bottle	Result (g/100mL)
1586	0.060
	0.061
1578	0.061
	0.060
857	0.061
	0.060
858	0.060
	0.061
856	0.060
	0.060
1522	0.060
	0.061
763	0.060
	0.060
761	0.060
	0.060
762	0.060
	0.060
759	0.060
	0.060

Mean	0.06025
Std. Dev.	0.000444262
Min	0.060
Max	0.061