

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	1613
9	1612
10	1615
11	1614
12	1616
13	1617
14	1624
15	1626
16	1625
17	1627
18	Cerilliant 100
19	1613
20	1612
21	1615
22	1614
23	1616
24	1617
25	1624
26	1626
27	1625
28	1627
29	Cerilliant 300
30	
31	
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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
BK

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:	0.080 g/210L
Lot #:	201404C
Manufacture Date:	4/8/2014
Expiration Date	4/8/2016

Operator: BK

Date: 5/13/14

Report Date 5/13/2014

Reviewer Brett Kirkland

Run Summary Data			Ethanol			n-Propanol		
Run Date	Channel	Sample	Lot	RT	Area	Conc.	RT	Area
5/13/2014	A	Vol's Mix	041513dKr	1.421	16320.52	0.040	2.019	276456.35
5/13/2014	A	Blank		0.000	0.00	0.000	1.997	267417.86
5/13/2014	A	CER 025	FN032210-01	1.421	10142.39	0.025	2.019	272589.77
5/13/2014	A	CER 100	FN050312-01	1.421	40369.75	0.100	2.019	269229.68
5/13/2014	A	CER 200	FN032712-01	1.421	81033.92	0.200	2.019	270256.89
5/13/2014	A	CER 400	FN012712-01	1.421	162486.77	0.400	2.019	269496.29
5/13/2014	A	Cerilliant 50	FN010112-01	1.421	20185.19	0.050	2.019	270100.95
5/13/2014	A	1613	201404C	1.422	38545.20	0.096	2.020	268818.80
5/13/2014	A	1612	201404C	1.421	38898.55	0.096	2.019	271262.63
5/13/2014	A	1615	201404C	1.421	38821.44	0.096	2.019	270868.29
5/13/2014	A	1614	201404C	1.421	38889.17	0.096	2.019	271153.63
5/13/2014	A	1616	201404C	1.393	38474.13	0.096	1.994	267929.02
5/13/2014	A	1617	201404C	1.421	38647.37	0.096	2.019	267843.27
5/13/2014	A	1624	201404C	1.421	38542.66	0.096	2.019	268651.50
5/13/2014	A	1626	201404C	1.394	38327.70	0.096	1.994	267409.86
5/13/2014	A	1625	201404C	1.421	38575.07	0.096	2.020	269177.52
5/13/2014	A	1627	201404C	1.421	38248.30	0.095	2.019	267319.83
5/13/2014	A	Cerilliant 100	FN050312-01	1.421	40121.55	0.100	2.019	268182.35
5/13/2014	A	1613	201404C	1.396	38275.28	0.096	1.997	266118.35
5/13/2014	A	1612	201404C	1.421	38227.38	0.096	2.019	266143.10
5/13/2014	A	1615	201404C	1.393	37743.98	0.096	1.994	263232.66
5/13/2014	A	1614	201404C	1.394	38144.91	0.096	1.994	265638.64
5/13/2014	A	1616	201404C	1.421	38130.46	0.096	2.019	265515.52
5/13/2014	A	1617	201404C	1.421	38153.63	0.096	2.019	265323.24
5/13/2014	A	1624	201404C	1.421	38019.72	0.096	2.019	265219.41
5/13/2014	A	1626	201404C	1.397	38181.37	0.096	1.997	266639.54
5/13/2014	A	1625	201404C	1.422	38405.45	0.096	2.020	267563.06
5/13/2014	A	1627	201404C	1.421	38335.83	0.095	2.019	268287.28
5/13/2014	A	Cerilliant 300	FN09061305	1.393	118249.77	0.300	1.994	261922.75

Amended 5/6/16

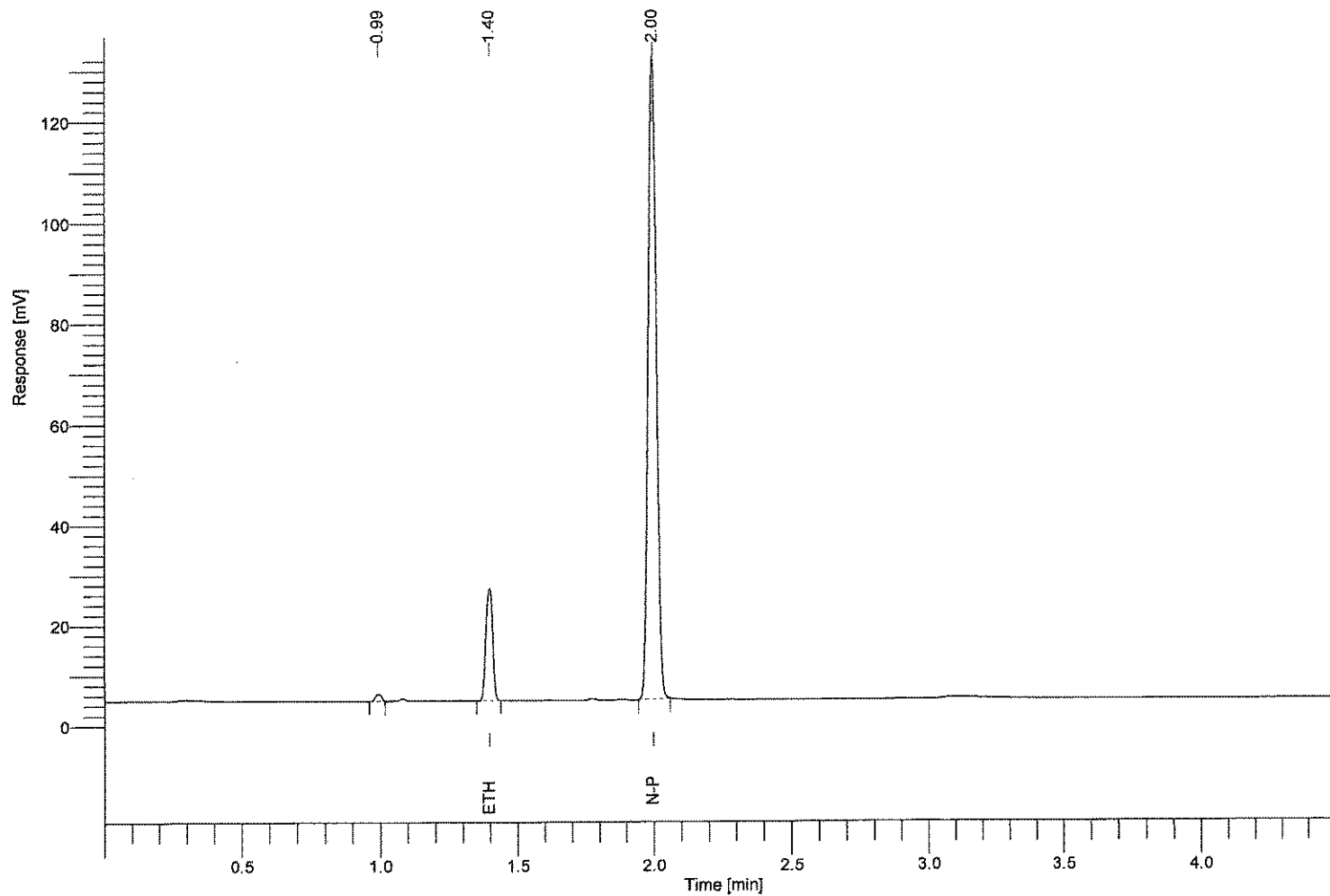
BK

Amended due to typo. Appropriate chromatogram has been attached.

Software Version : 6.3.2.0646
 Reprocess Number : gc-pc: 717
 Sample Name : 80
 Instrument Name : ClarusGC
 Rack/Vial : 0/0
 Sample Amount : 1.000000
 Cycle : 19

Date : 5/13/2014 11:53:56 AM
 Data Acquisition Time : 5/13/2014 11:49:11 AM
 Channel : A
 Operator : manager
 Dilution Factor : 1.000000

Result File : c:\totalchrom data\05132014\1613a.rst
 Sequence File : C:\Totalchrom Sequences\2013\acs validation05132014bhk.seq



Component Name	Time [min]	RRt	Area [uV*sec]	Conc. g/100ml
methanol	1.220	-----	0.00	0.000
ethanol	1.396	0.699	38275.28	0.096
isopropanol	1.640	-----	0.00	0.000
acetone	1.910	-----	0.00	0.000
n-propanol	1.997	1.000	266118.35	-----

ASK

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15	1626
16	1625
17	1627
18	Cerilliant 100
19	1613
20	1612
21	1615
22	1614
23	1616
24	1617
25	1624
26	1626
27	1625
28	1627
29	Cerilliant 300
30	
31	
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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	✓

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:	0.080 g/210L
Lot #:	201404C
Manufacture Date:	4/8/2014
Expiration Date	4/8/2016

Operator: BK

Date: 5/13/14

Alcohol Analysis QC Summary

Report Date 5/13/2014

BK

Reviewer Brett Kirkland

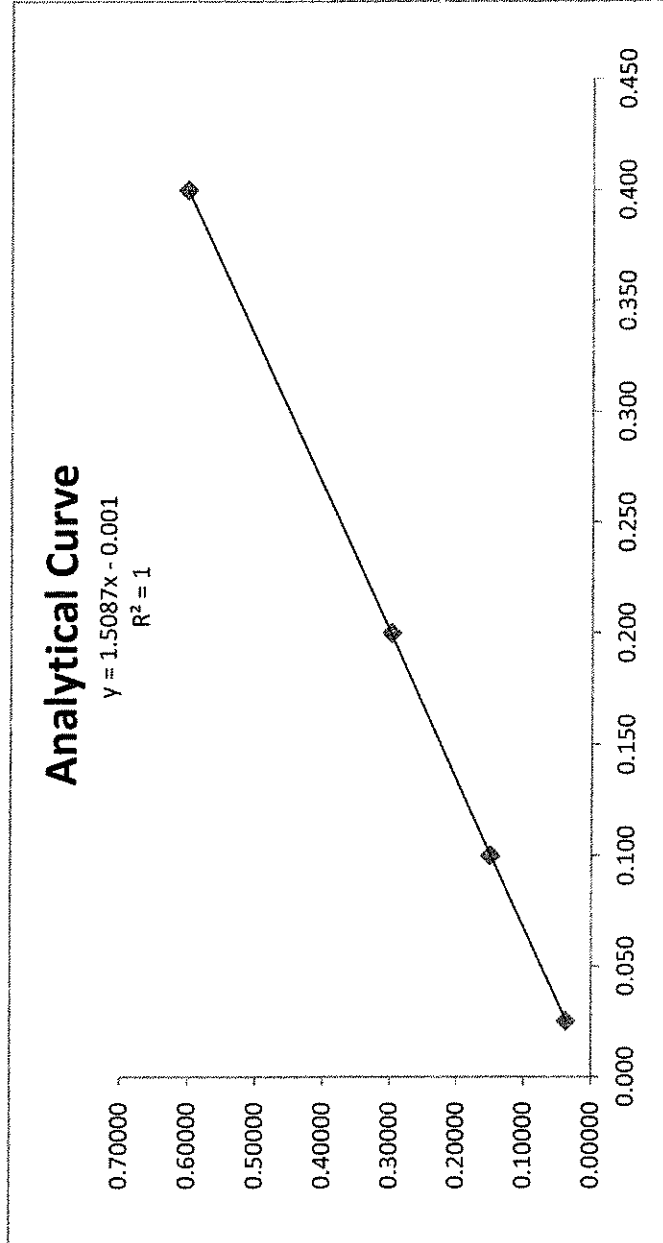
Run Summary Data			Ethanol				n-Propanol				
Run Date	Channel	Sample	Lot	RT	Area	Conc.	RT	Area	Conc.	RT	Area
5/13/2014	A	VoIs Mix	041513dkr	1.421	16320.52	0.040	0.040	276456.35	0.040	2.019	276456.35
5/13/2014	A	Blank		0.000	0.00	0.000	0.000	267417.86	0.000	1.997	267417.86
5/13/2014	A	CER 025	FN032210-01	1.421	10142.39	0.025	0.025	272589.77	0.025	2.019	272589.77
5/13/2014	A	CER 100	FN050312-01	1.421	40369.75	0.100	0.100	269229.68	0.100	2.019	269229.68
5/13/2014	A	CER 200	FN032712-01	1.421	81033.92	0.200	0.200	270256.89	0.200	2.019	270256.89
5/13/2014	A	CER 400	FN012712-01	1.421	162486.77	0.400	0.400	269496.29	0.400	2.019	269496.29
5/13/2014	A	Cerilliant 50	FN010112-01	1.421	20185.19	0.050	0.050	270100.95	0.050	2.019	270100.95
5/13/2014	A	1613	201404C	1.422	38545.20	0.096	0.096	268818.80	0.096	2.020	268818.80
5/13/2014	A	1612	201404C	1.421	38898.55	0.096	0.096	271262.63	0.096	2.019	271262.63
5/13/2014	A	1615	201404C	1.421	38821.44	0.096	0.096	270868.29	0.096	2.019	270868.29
5/13/2014	A	1614	201404C	1.421	38889.17	0.096	0.096	271153.63	0.096	2.019	271153.63
5/13/2014	A	1616	201404C	1.393	38474.13	0.096	0.096	267929.02	0.096	1.994	267929.02
5/13/2014	A	1617	201404C	1.421	38647.37	0.096	0.096	267843.27	0.096	2.019	267843.27
5/13/2014	A	1624	201404C	1.421	38542.66	0.096	0.096	268651.50	0.096	2.019	268651.50
5/13/2014	A	1626	201404C	1.394	38327.70	0.096	0.096	267409.86	0.096	1.994	267409.86
5/13/2014	A	1625	201404C	1.421	38575.07	0.096	0.096	269177.52	0.096	2.020	269177.52
5/13/2014	A	1627	201404C	1.421	38248.30	0.095	0.095	267319.83	0.095	2.019	267319.83
5/13/2014	A	Cerilliant 100	FN050312-01	1.421	40121.55	0.100	0.100	268182.35	0.100	2.019	268182.35
5/13/2014	A	1613	201404C	1.396	38275.00	0.096	0.096	266118.35	0.096	1.997	266118.35
5/13/2014	A	1612	201404C	1.421	38227.38	0.096	0.096	266143.10	0.096	2.019	266143.10
5/13/2014	A	1615	201404C	1.393	37743.98	0.096	0.096	263232.66	0.096	1.994	263232.66
5/13/2014	A	1614	201404C	1.394	38144.91	0.096	0.096	265638.64	0.096	1.994	265638.64
5/13/2014	A	1616	201404C	1.421	38130.46	0.096	0.096	265515.52	0.096	2.019	265515.52
5/13/2014	A	1617	201404C	1.421	38153.63	0.096	0.096	265323.24	0.096	2.019	265323.24
5/13/2014	A	1624	201404C	1.421	38019.72	0.096	0.096	265219.41	0.096	2.019	265219.41
5/13/2014	A	1626	201404C	1.397	38181.37	0.096	0.096	266639.54	0.096	1.997	266639.54
5/13/2014	A	1625	201404C	1.422	38405.45	0.096	0.096	267563.06	0.096	2.020	267563.06
5/13/2014	A	1627	201404C	1.421	38335.83	0.095	0.095	268287.28	0.095	2.019	268287.28
5/13/2014	A	Cerilliant 300	FN09061305	1.393	118249.77	0.300	0.300	261922.75	0.300	1.994	261922.75

ALCOHOL ANALYSIS QC SUMMARY

Report Date	5/13/2014
Reviewer	Brett Kirkland <i>BK</i>

RUN SUMMARY DATA				Ethanol		n-Propanol		
Run Date	Channel	Sample	Lot	RT	Area	Conc.	RT	Area
5/13/2014	A	CER 025	FN032210-01	1.421	10142.39	0.025	2.019	272589.77
5/13/2014	A	CER 100	FN050312-01	1.421	40369.75	0.100	2.019	269229.68
5/13/2014	A	CER 200	FN032712-01	1.421	81033.92	0.200	2.019	270256.89
5/13/2014	A	CER 400	FN012712-01	1.421	162486.77	0.400	2.019	269496.29

Summary	Standard	g/dL	Ratio	Calc.	Diff
	Blank	0.000	0.00000	0.00000	0.00000
Slope	1.5087	0.025	0.03721	0.02530	0.00030
Intercept	-0.0010	0.100	0.14995	0.10003	0.00003
Standard Error	0.000791308	0.200	0.29984	0.19939	-0.00061
R-Squared	1.0000	0.400	0.60293	0.40028	0.00028



Source: Alcohol Countermeasure Systems, Inc.

Lot	201404C
Level	0.080 g/210L
Manufacture Date	4/8/2014
Expiration Date	4/8/2016

BK

Bottle	Result (g/100mL)
1613	0.096
	0.096
1612	0.096
	0.096
1615	0.096
	0.096
1614	0.096
	0.096
1616	0.096
	0.096
1617	0.096
	0.096
1624	0.096
	0.096
1626	0.096
	0.096
1625	0.096
	0.096
1627	0.095
	0.095

Mean	0.095915
Std. Dev.	0.000319992
Min	0.095
Max	0.0963

Loadlist-Alcohol Reference Solution Verification

Location	Sample
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9	1612
10	1615
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12	1616
13	1617
14	1624
15	1626
16	1625
17	1627
18	Cerilliant 100
19	1613
20	1612
21	1615
22	1614
23	1616
24	1617
25	1624
26	1626
27	1625
28	1627
29	Cerilliant 300
30	1st Mouth OH
31	1st Mouth OHa
32	Last Mouth OH
33	Last Mouth Oha
34	
35	
36	
37	
38	
39	
40	

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

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	
Mouth Alcohol Solution	
Level Tested:	Qualitative
Lot #:	2014-A
Manufacture Date:	4/24/2014
Expiration Date	4/24/2016

Operator: ABK

Date: 5/13/14

*Note: Run w/ ACS Lot 201404C
for chromatograms of standards see
verification of Lot 201404C 0.08g/210L