VERMONT FORENSIC LABORATORY

BLOOD ALCOHOL DATA REVIEW CHECKLIST

JSO 6/10/16

~~AGENCY CASE#:~~ FN07031402 **ANALYST:** JSO

~~LAB #:~~ (Cerilliant lot #)

TECHNICAL REVIEWER: [signature] **DATE:** 6/10/16

- [x] Relevant lot numbers listed?
- [x] Batch run within 7 days of valid calibration?
- [x] Calibration line correlation factors (R^2) at least 0.99?
- [x] Calibration data has been reprocessed against complete calibration curve?
- [x] Data processed against correct calibration curves?
- [x] Blank sample chromatograms include only surrogate and internal standard peaks?
- [x] Timing mix chromatogram demonstrates appropriate identification of components and separation from ethanol?
- [x] Aqueous QC, whole blood QC, 0.050% and 0.200% CCS samples present and logged in control charts?
- [x] No more than 10 samples bracketed between alternating CCS?
- [x] Surrogate compound concentrations between 0.900 to 1.100 g/100 ml?
- [x] Internal standard peak areas within ±20% of calibration batch average IS peak area?
- [x] Reported results are means of two or more replicates with two channel values each?
  1. In the event of QNS for 2 (two) replicates a notation must be made on the worksheet.
  2. In the event that more than 2 (two) results are used to determine the reported result a notation is made on the worksheet.
- [x] %CV for all replicate values less than 5%?
- [x] All replicates for each sample within ±5% from the calculated mean?
- [x] Calibration and control results within ± 10% of the known values?
- [x] Data transcribed correctly and calculations verified?

Comments:

ADMINISTRATIVE REVIEWER: [signature] **DATE:** 6/13/16

- [x] Agency Case # and Lab # and Evidence description match submission form?
- [NA] Submitting agency, investigator, suspect, victim, DOB, CC all match submission form?
- [NA] Chain of Custody complete and dated appropriately?
- [x] Are all pages numbered and initialed on the Examination Documents?
- [x] Case number (agency or lab number) written on all pages of the case file?
- [x] Appropriate review(s) have been completed?
- [NA] Is the exam end date documented in the paper case file consistent with the exam end date in LIMS?

Comments:

DIRECTOR REVIEWER: [signature] **DATE:** 6/13/16

- [x] Do the report and associated paperwork meet administrative expectations?
- [x] Have the appropriate reviews been completed?

Check Mark or X = pass, NA= Not Applicable

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

Certified Quality
ISO GUIDE 34
ISO/IEC 17025
ISO 13485
ISO 15194
ISO 9001
GMP/GLP

Certificate of Analysis

Certified Reference Standard - NIST Traceable

Ethanol-500

Ethyl Alcohol

Catalog Number: E-053
Solution Lot: FN07031402
Expiration Date: August 2019
Diluent: Water
Volume per Ampoule: 1.2 mL
Storage: Refrigerate. Do not freeze.
Intended Use: For R&D/ analytical purposes only. Not suitable for human or animal consumption.

- Expiration Date has been established through real time stability studies and applies to the ampoule stored unopened at the recommended storage condition.
- Ampoules are overfilled to ensure a minimum 1.2 mL volume fill. We advise laboratories to use measured volumes of this standard solution before diluting to the desired concentration. The standard should be used immediately after opening to avoid concentration changes due to evaporation.
- For quantitative applications, the minimum sample size for intended use is 100 µL.

Component	Solution Chromatographic Purity	Certified Concentration
Ethanol	>99.9%	500.0 ± 1.8 mg/dL

- Uncertainty of the concentration, expressed in terms of volume, is an expanded uncertainty in accordance with ISO 17025 and ISO Guide 34 at the 95% confidence interval using a coverage factor of k=2 and has been calculated by statistical analysis of our production methods applicable to ethanol reference standards and incorporates uncertainty of the purity factor, material density and mass measurement. The dispensing process is sufficiently controlled as to not be a significant contributor to uncertainty calculations and is, therefore, excluded. Solution stability is established through real time stability studies and is, therefore, excluded.
- When expressed in percentage terms, the relative standard uncertainty of the concentration is 0.175% and the relative expanded uncertainty is 0.35% at the 95% confidence interval (k=2).
- The purity factor (PF) mass balance measurement equation is used to calculate the amount of ethanol required to achieve an accurate concentration of the solution standard, accounting for both purity and residual water content.
- Purity factor has been established through independent certification of the neat analyte to ISO 17025 standards – See page 2.
- Solution purity is verified post ampouling and demonstrates no contamination or degradation has occurred.

Traceability to SI through NIST:

- This standard has been prepared and certified under the ISO Guide 34 and ISO/IEC 17025 standards and meets the requirements of a Certified Reference Material as defined by ISO.
- Gravimetrically prepared using qualified balances calibrated semi-annually by Mettler Toledo to ISO 17025 requirements and using NIST traceable weights. Qualification of each balance includes the assignment of a minimum weighing by Mettler Toledo taking into consideration the balance and installed environmental conditions to ensure each weighing complies with USP tolerances of NMT 0.1% relative uncertainty.
- Balance calibration adjustments are performed weekly utilizing the balance's internal adjustment mechanism and with NIST traceable weights.
- Balance calibration is verified prior to each use and is performed utilizing NIST traceable weights. Weigh tapes from the balance calibration are included in the production batch record for this standard. Production data package available upon request.
- Fill volume is gravimetrically verified throughout the dispensing process using qualified balances calibrated with NIST traceable weights.
- Weight sets used for all balance calibrations are calibrated externally by an ISO 17025 accredited calibration laboratory to NIST standards.
- Concentration of this standard has been analytically verified against a NIST SRM and a Control using a validated method. See page 2.

Cerilliant certifies that this standard meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiration date. Warranty applies to ampoules stored unopened and stored under the recommended storage conditions. Warranty and expiry do not extend to solutions into which this product has been incorporated. Establishment of shelf life of all such products is the responsibility of the user.

ACLASS ACCREDITED

October 07, 2014

Cerilliant
Analytical Reference Standards
a SIGMA-ALDRICH company

Analytical Verification of Solution Standard Concentration and Batch Homogeneity:

Solution Standard	Lot Number	Results compared to NIST SRM Lot 2896 (mg/dL)	Homogeneity (ampoule to ampoule consistency) %RSD
New Lot	FN07031402	498.1	0.91%
Prior Lot	FN012813-01	499.4	1.22%
Acceptance Criteria		±2%	≤2%

- Concentration is calculated as the average of multiple analyses conducted using a validated Headspace GC/FID method. The validated GC/HS method has been demonstrated to adequately detect and quantitate ethanol concentrations ranging from 5 to 600 mg/dL. Relative standard uncertainty of the analysis is 1.675% and includes both uncertainty of the analytical method and uncertainty of the NIST SRM concentration.
- The Control is independently prepared from a different lot of neat ethanol to ensure no bias in the analysis and independently qualified against a NIST SRM.
- Homogeneity is ensured through rigorous production process controls statistically analyzed to evaluate risk and verified by analysis. The %RSD of samples pulled from across the lot using a stratified random sampling plan demonstrates ampoule to ampoule consistency or homogeneity of the New Lot.
- The %RSD of the Prior Lot represents system suitability on the date of analysis. Triplicate injections of the Prior Lot are bracketed at the beginning and end of the sequence. %RSD criteria ensures proper system performance throughout the sequence.
- All instruments used for certification of the neat materials and verification of the solution concentration and homogeneity are fully qualified through an Installation Qualification and an Operational Qualification which is repeated annually. System suitability is performed daily with rigorous acceptance criteria to ensure the system continues to perform within the validated parameters.

Solution Standard Assay Parameters

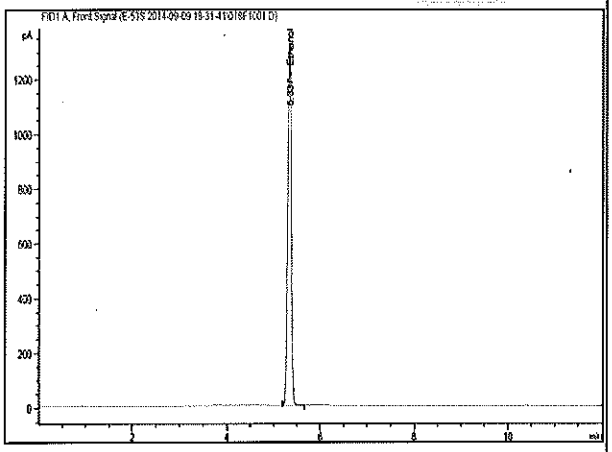
Analysis Method: GC/FID Headspace

Column: DB-ALC1 30 m x 0.53 mm ID, 3.0 µm film thickness

Temp Program: 40°C hold for 12 min

Injector Temp: 200°C

Detector Temp: 250°C



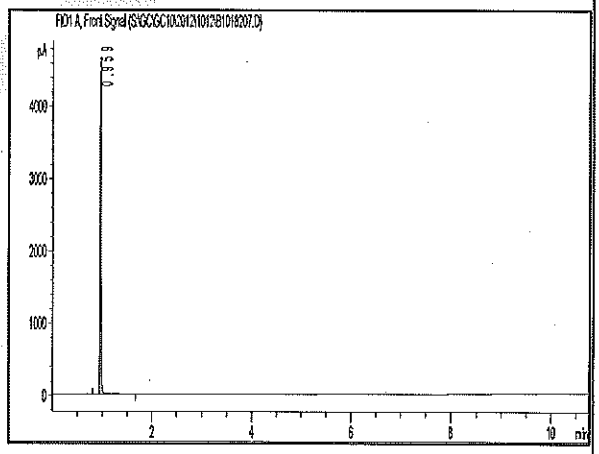
Neat Material Analysis

Purity by GC/FID Analysis: >99.9%

Water Content by Karl Fischer: 0.09%

Purity Factor: 99.90%

The purity factor (PF) mass balance measurement equation is used to calculate the amount of ethanol required to achieve an accurate concentration of the solution standard, accounting for both purity and residual water content.



Result Report

Laboratory Case Number: V

Item Number: ~~Lot 07031402~~

LOT: FN07031402
JSD 6/10/16

	Channel A	Channel B
Replicate 1	**0.5060**	**0.5016**
Replicate 2	**0.5075**	**0.5037**

Additional replicates:	**No**

Mean	**0.5047**
-5%	**0.4795**
+5%	**0.5299**
%CV	**0.51%**

Expanded Uncertainty	**9.1%**
Uncertainty Interval	**0.046**

Blood Analysis Result (99.7% Confidence Interval)

0.504 ± 0.046 g/100 ml ethanol

Analyst: JSD

Date: 6/10/16

TV = 0.500

$$\% \text{ rec} = \frac{0.504}{0.500} * 100$$

$$\boxed{\% \text{ rec} = 100.8\%}$$

JSD 6/10/16

Laboratory Case Number: V

Result Report

Item Number: ~~Lot 07031402~~

1:1 dilution of 0.5g/100mL std. JSD 6/10/16
Lot FN07031402

	Channel A	Channel B
Replicate 1	0.2518	0.2505
Replicate 2	0.2527	0.2514

Additional replicates:	No

Mean	0.2516
-5%	0.2390
+5%	0.2642
%CV	0.36%

Expanded Uncertainty	9.1%
Uncertainty Interval	0.023

Blood Analysis Result (99.7% Confidence Interval)

~~0.251 ± 0.023 g/100 ml ethanol~~

~~0.251 * 2 = 0.502 ± 0.046 g/100 mL ethanol JSD 6/10/16~~

0.2516 * 2 = 0.503 ± 0.046 g/100mL ethanol JSD 6/13/16

Analyst: JSD

Date: 6/10/16

TV = 0.500

~~% rec = 0.502 / 0.500 * 100~~

~~% rec = 100.4%~~

~~JSD 6/10/16~~

~~JSD 6/13/16~~

TV = 0.500

% rec = 0.503 / 0.500 * 100

% rec = 100.6%

JSD 6/13/16

Sequence : C:\TC Data\Data\06062016\ALC cal 06062016.seq

Study Name : 06062016 **Instrument Name** : Clarus 580 GC
Data Acquisition : Jun 06, 2016 at 10:15:11 AM **Report Date** : Jun 06, 2016 at 12:00:25 PM

Column A Reprocessed 6/6/16 JSD

Cycle	Sample	Instrument Method	Processing Method	Result File
1	BLANK	alc gc method.mth	alc a cal 06062016.mth	06062016A001-20160606-115415.rst
2	STD A	alc gc method.mth	alc a cal 06062016.mth	06062016A002-20160606-115415.rst
3	STD B	alc gc method.mth	alc a cal 06062016.mth	06062016A003-20160606-115415.rst
4	STD C	alc gc method.mth	alc a cal 06062016.mth	06062016A004-20160606-115415.rst
5	STD D	alc gc method.mth	alc a cal 06062016.mth	06062016A005-20160606-115415.rst
6	STD E	alc gc method.mth	alc a cal 06062016.mth	06062016A006-20160606-115415.rst
7	STD F	alc gc method.mth	alc a cal 06062016.mth	06062016A007-20160606-115415.rst
8	BLANK	alc gc method.mth	alc a cal 06062016.mth	06062016A008-20160606-115416.rst

Column B

Cycle	Sample	Instrument Method	Processing Method	Result File
1	BLANK	alc gc method.mth	alc b cal 06062016.mth	06062016B001-20160606-115415.rst
2	STD A	alc gc method.mth	alc b cal 06062016.mth	06062016B002-20160606-115415.rst
3	STD B	alc gc method.mth	alc b cal 06062016.mth	06062016B003-20160606-115415.rst
4	STD C	alc gc method.mth	alc b cal 06062016.mth	06062016B004-20160606-115415.rst
5	STD D	alc gc method.mth	alc b cal 06062016.mth	06062016B005-20160606-115415.rst
6	STD E	alc gc method.mth	alc b cal 06062016.mth	06062016B006-20160606-115415.rst
7	STD F	alc gc method.mth	alc b cal 06062016.mth	06062016B007-20160606-115416.rst
8	BLANK	alc gc method.mth	alc b cal 06062016.mth	06062016B008-20160606-115416.rst

Calibration Internal Standard Data

06/06/2016 JSD

	Internal Standard Area			
Sample	**Channel A**	**Channel B**	**Supplier**	**Lot**
Blank	108634	105604	VFL	BL-12302015
STD A	105721	102991	Cerilliant	FN080612-04
STD B	100817	98270	Cerilliant	FN08101401
STD C	105528	103044	Cerilliant	FN06231406
STD D	108783	106471	Cerilliant	FN09051304
STD E	103704	101687	Cerilliant	FN12011401
STD F	106548	104658	Cerilliant	FN11191402
Blank	101203	98894	VFL	BL-12302015
Average	103910			
± 20%	**83128**	**124692**		

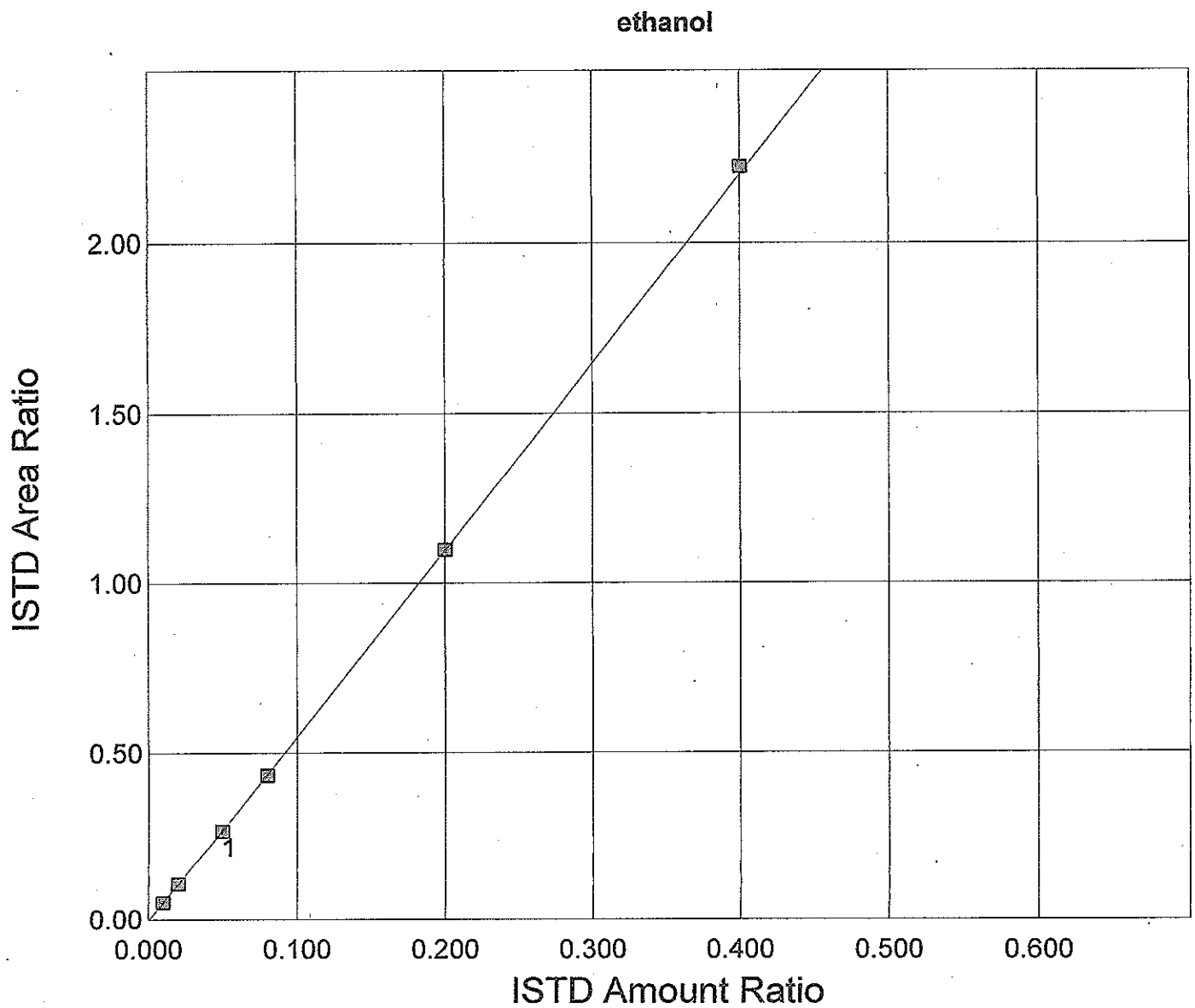
FN07031402 JSD

Fit Analysis Output For Method File: C:\TC Data\Data\06062016\ALC B cal 06062016.mth
Reprocess Number : forensic-pc: 6289
Component Name : ethanol
Date : 6/6/2016 11:59:43 AM

Curve Parameters:

Curve #1 : 1st Order
Weighting Factor = 1/(x*x) R-Squared = 0.999929
Calibration Curve : Y = (-0.002874) +(5.501625) X

Curve #1 : Level Name	Observed X-Value	Calculated X-Value	Delta	%Diff.	Observed Y-Value	Calculated Y-Value	Delta	%Diff.
1	0.010000	0.010001	-7.991e-07	-0.008	0.052146	0.052	0.000	0.008
2	0.020000	0.020084	-8.403e-05	-0.418	0.107620	0.107	0.000	0.431
3	0.050000	0.049611	0.000389	0.784	0.270068	0.272	-0.002	-0.786
4	0.080000	0.079411	0.000589	0.742	0.434013	0.437	-0.003	-0.742
5	0.200000	0.200192	-1.919e-04	-0.096	1.098506	1.097	0.001	0.096
6	0.400000	0.403961	-0.003961	-0.981	2.219569	2.198	0.022	0.992



FN07031402 850 5

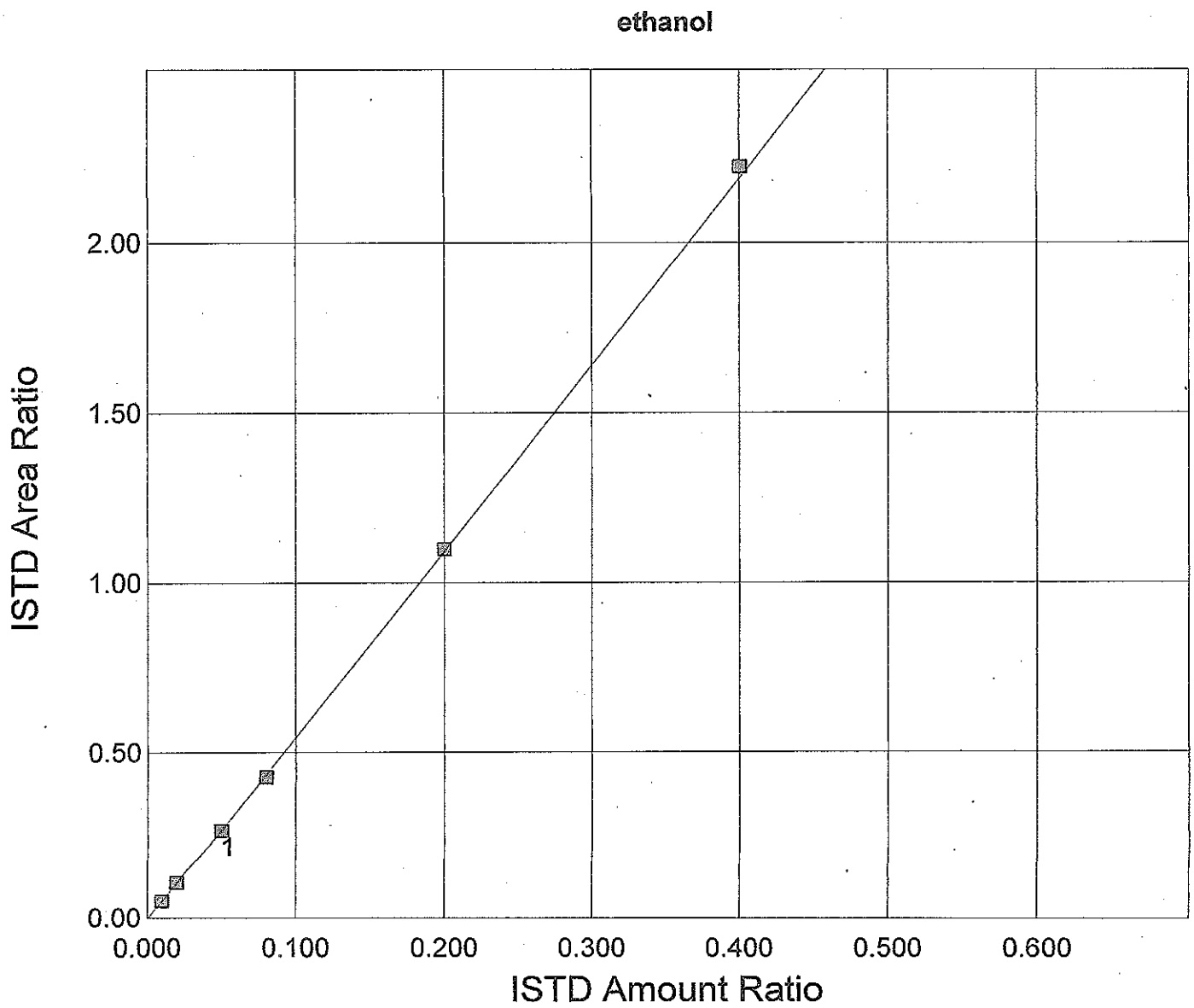
Fit Analysis Output For Method File: C:\TC Data\Data\06062016\ALC A cal 06062016.mth
Reprocess Number : forensic-pc: 6289
Component Name : ethanol
Date : 6/6/2016 11:59:26 AM

Curve Parameters:

Curve #1 : 1st Order
Weighting Factor = 1/(x*x) R-Squared = 0.999810
Calibration Curve : Y = (-0.002323) +(5.474020) X

Curve #1 :

Level Name	Observed X-Value	Calculated X-Value	Delta	%Diff.	Observed Y-Value	Calculated Y-Value	Delta	%Diff.
1	0.010000	0.010029	-2.906e-05	-0.290	0.052576	0.052	0.000	0.304
2	0.020000	0.019996	4.1567e-06	0.021	0.107134	0.107	-0.000	-0.021
3	0.050000	0.049669	0.000331	0.666	0.269567	0.271	-0.002	-0.667
4	0.080000	0.078619	0.001381	1.756	0.428041	0.436	-0.008	-1.735
5	0.200000	0.201190	-0.001190	-0.592	1.098997	1.092	0.007	0.596
6	0.400000	0.406089	-0.006089	-1.500	2.220619	2.187	0.033	1.524



FN07031402

6

Sequence : C:\TC Data\Data\06062016\ALC cal 06062016.seq

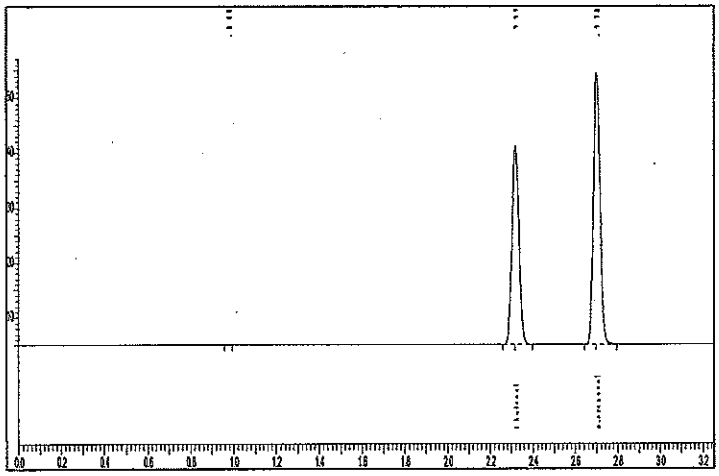
Sample Name : BLANK
Data Acquisition : Jun 06, 2016 at 10:15:11 AM
Cycle : 1

Instrument Name : Clarus 580 GC
Report Date : Jun 06, 2016 at 11:55:35 AM
Sequence Name: : 06062016

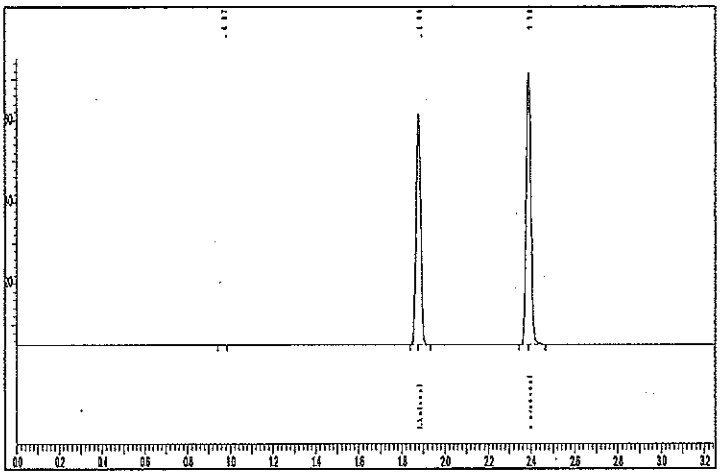
Inst Method : c:\tc data\methods\alc gc method.mth
Report : C:\TC Data\Methods\ALCreport.tpm

Channel A:
Result File : C:\TC Data\Data\06062016\06062016A001-20160606-115415.rst
Proc Method : c:\tc data\data\06062016\alc a cal 06062016.mth
Cal Method : c:\tc data\data\06062016\alc a cal 06062016.mth

Channel B:
Result File : C:\TC Data\Data\06062016\06062016B001-20160606-115415.rst
Proc Method : c:\tc data\data\06062016\alc b cal 06062016.mth
Cal Method : c:\tc data\data\06062016\alc b cal 06062016.mth



Channel A Chromatogram



Channel B Chromatogram

Peak #	Ret (min)	Compound	Area	Amount (g/100 ml)
2	2.319	t-butanol	83589	1.0051
3	2.700	n-propanol	108634	1.0000

Peak #	Ret (min)	Compound	Area	Amount (g/100 ml)
2	1.877	t-butanol	83067	1.0088
3	2.388	n-propanol	105604	1.0000

Sequence : C:\TC Data\Data\06062016\ALC cal 06062016.seq

Sample Name : STD A
Data Acquisition : Jun 06, 2016 at 10:25:12 AM
Cycle : 2

Instrument Name : Clarus 580 GC
Report Date : Jun 06, 2016 at 11:55:35 AM
Sequence Name: : 06062016

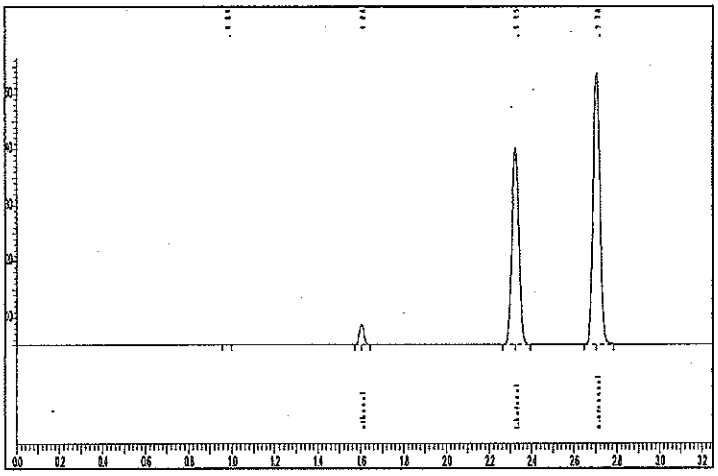
Inst Method : c:\tc data\methods\alc gc method.mth
Report : C:\TC Data\Methods\ALCreport.tpm

Channel A:

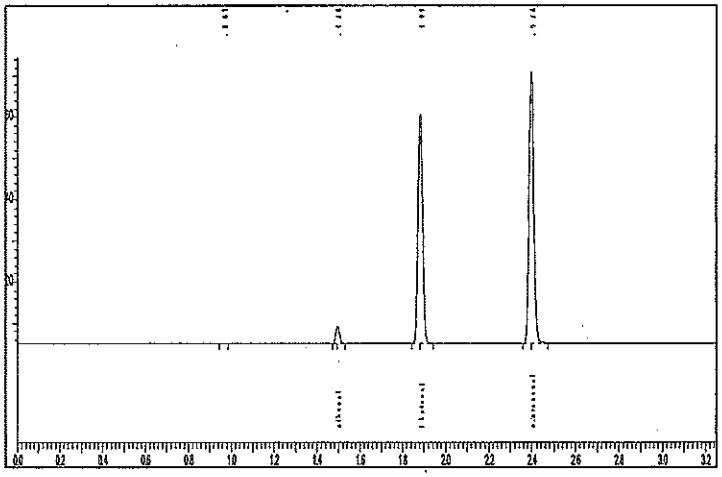
Result File : C:\TC Data\Data\06062016\06062016A002-20160606-115415.rst
Proc Method : c:\tc data\data\06062016\alc a cal 06062016.mth
Cal Method : c:\tc data\data\06062016\alc a cal 06062016.mth

Channel B:

Result File : C:\TC Data\Data\06062016\06062016B002-20160606-115415.rst
Proc Method : c:\tc data\data\06062016\alc b cal 06062016.mth
Cal Method : c:\tc data\data\06062016\alc b cal 06062016.mth



Channel A Chromatogram



Channel B Chromatogram

Peak #	Ret (min)	Compound	Area	Amount (g/100 ml)
2	1.603	ethanol	5558	0.0100
3	2.322	t-butanol	81261	1.0040
4	2.704	n-propanol	105721	1.0000

Peak #	Ret (min)	Compound	Area	Amount (g/100 ml)
2	1.495	ethanol	5371	0.0100
3	1.882	t-butanol	80995	1.0086
4	2.396	n-propanol	102991	1.0000

Sequence : C:\TC Data\Data\06062016\ALC cal 06062016.seq

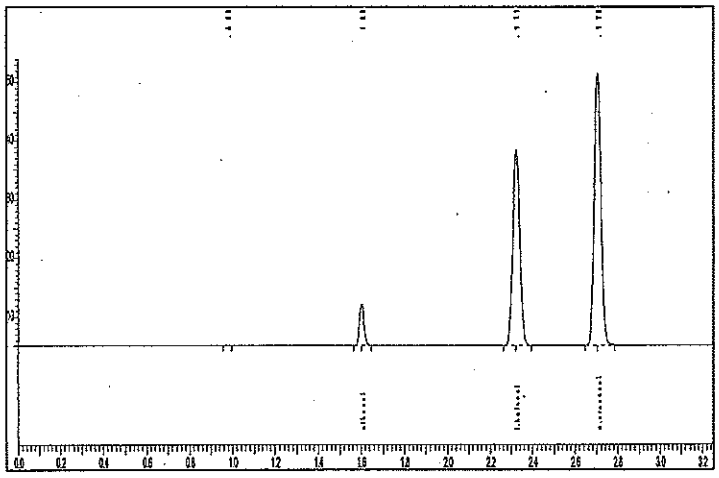
Sample Name : STD B
Data Acquisition : Jun 06, 2016 at 10:35:12 AM
Cycle : 3

Instrument Name : Clarus 580 GC
Report Date : Jun 06, 2016 at 11:55:35 AM
Sequence Name: : 06062016

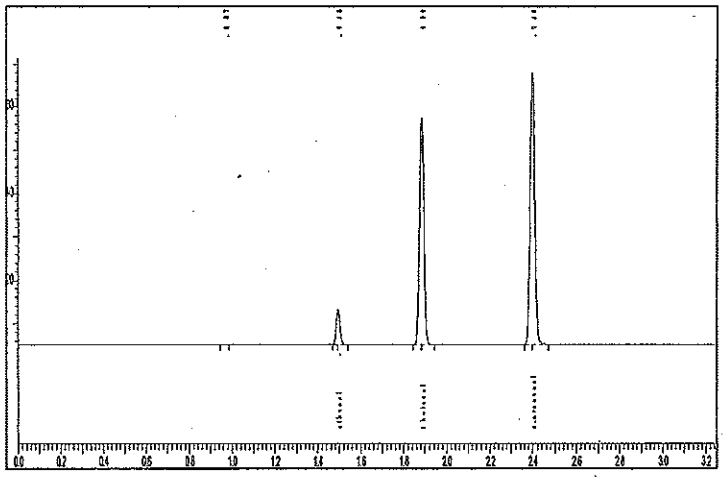
Inst Method : c:\tc data\methods\alc gc method.mth
Report : C:\TC Data\Methods\ALCreport.tpm

Channel A:
Result File : C:\TC Data\Data\06062016\06062016A003-20160606-115415.rst
Proc Method : c:\tc data\data\06062016\alc a cal 06062016.mth
Cal Method : c:\tc data\data\06062016\alc a cal 06062016.mth

Channel B:
Result File : C:\TC Data\Data\06062016\06062016B003-20160606-115415.rst
Proc Method : c:\tc data\data\06062016\alc b cal 06062016.mth
Cal Method : c:\tc data\data\06062016\alc b cal 06062016.mth



Channel A Chromatogram



Channel B Chromatogram

Peak #	Ret (min)	Compound	Area	Amount (g/100 ml)
2	1.602	ethanol	10801	0.0200
3	2.322	t-butanol	76819	0.9953
4	2.704	n-propanol	100817	1.0000

Peak #	Ret (min)	Compound	Area	Amount (g/100 ml)
2	1.495	ethanol	10576	0.0201
3	1.882	t-butanol	76675	1.0006
4	2.397	n-propanol	98270	1.0000

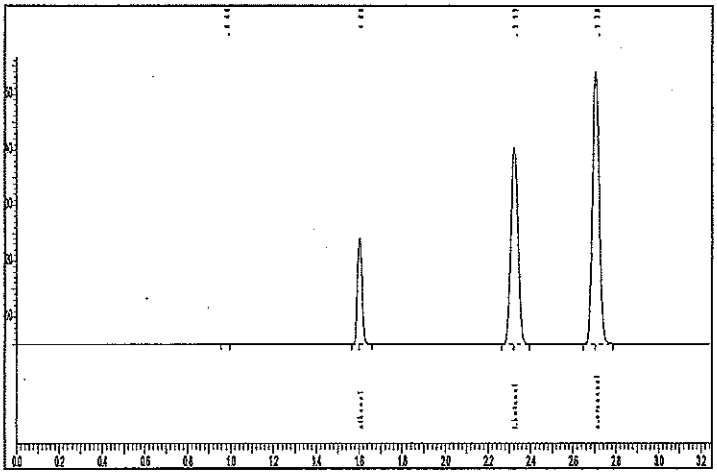
Sequence : C:\TC Data\Data\06062016\ALC cal 06062016.seq

Sample Name : STD C
Data Acquisition : Jun 06, 2016 at 10:45:12 AM
Cycle : 4
Instrument Name : Clarus 580 GC
Report Date : Jun 06, 2016 at 11:55:35 AM
Sequence Name: : 06062016

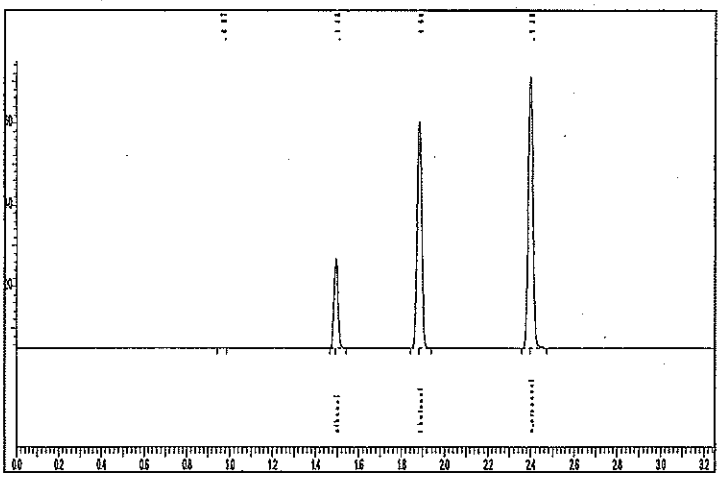
Inst Method : c:\tc data\methods\alc gc method.mth
Report : C:\TC Data\Methods\ALCreport.tpm

Channel A:
Result File : C:\TC Data\Data\06062016\06062016A004-20160606-115415.rst
Proc Method : c:\tc data\data\06062016\alc a cal 06062016.mth
Cal Method : c:\tc data\data\06062016\alc a cal 06062016.mth

Channel B:
Result File : C:\TC Data\Data\06062016\06062016B004-20160606-115415.rst
Proc Method : c:\tc data\data\06062016\alc b cal 06062016.mth
Cal Method : c:\tc data\data\06062016\alc b cal 06062016.mth



Channel A Chromatogram



Channel B Chromatogram

Peak #	Ret (min)	Compound	Area	Amount (g/100 ml)
2	1.602	ethanol	28447	0.0497
3	2.322	t-butanol	81099	1.0039
4	2.704	n-propanol	105528	1.0000

Peak #	Ret (min)	Compound	Area	Amount (g/100 ml)
2	1.494	ethanol	27829	0.0496
3	1.883	t-butanol	80881	1.0066
4	2.397	n-propanol	103044	1.0000

Sequence : C:\TC Data\Data\06062016\ALC cal 06062016.seq

Sample Name : STD D
Data Acquisition : Jun 06, 2016 at 10:55:13 AM
Cycle : 5

Instrument Name : Clarus 580 GC
Report Date : Jun 06, 2016 at 11:55:35 AM
Sequence Name: : 06062016

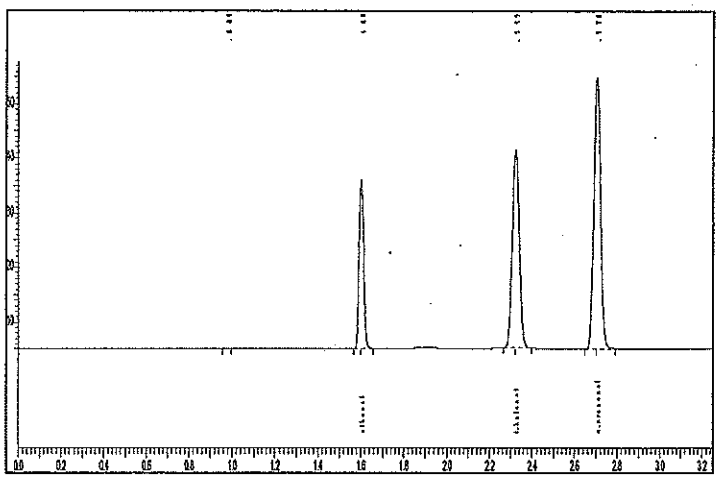
Inst Method : c:\tc data\methods\alc gc method.mth
Report : C:\TC Data\Methods\ALCreport.tpm

Channel A:

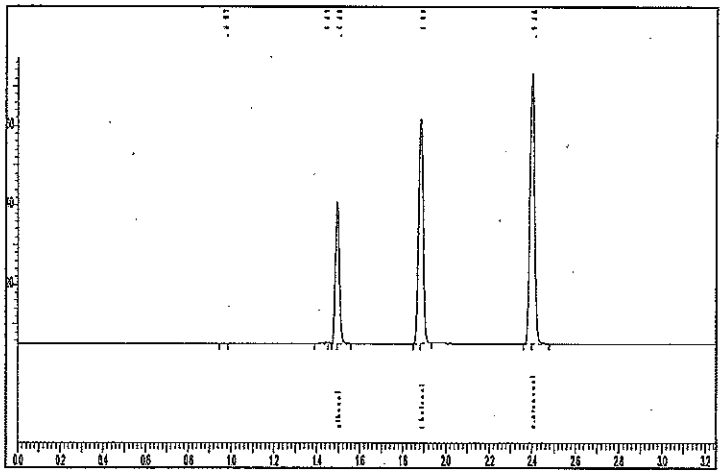
Result File : C:\TC Data\Data\06062016\06062016A005-20160606-115415.rst
Proc Method : c:\tc data\data\06062016\alc a cal 06062016.mth
Cal Method : c:\tc data\data\06062016\alc a cal 06062016.mth

Channel B:

Result File : C:\TC Data\Data\06062016\06062016B005-20160606-115415.rst
Proc Method : c:\tc data\data\06062016\alc b cal 06062016.mth
Cal Method : c:\tc data\data\06062016\alc b cal 06062016.mth



Channel A Chromatogram



Channel B Chromatogram

Peak #	Ret (min)	Compound	Area	Amount (g/100 ml)
2	1.602	ethanol	46563	0.0786
3	2.321	t-butanol	83729	1.0054
4	2.703	n-propanol	108783	1.0000

Peak #	Ret (min)	Compound	Area	Amount (g/100 ml)
3	1.493	ethanol	46210	0.0794
4	1.883	t-butanol	83038	1.0002
5	2.397	n-propanol	106471	1.0000

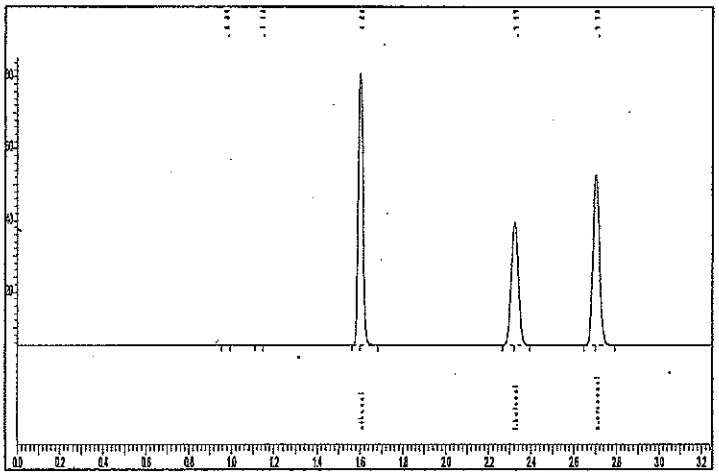
Sequence : C:\TC Data\Data\06062016\ALC cal 06062016.seq

Sample Name : STD E
Data Acquisition : Jun 06, 2016 at 11:05:13 AM
Cycle : 6
Instrument Name : Clarus 580 GC
Report Date : Jun 06, 2016 at 11:55:35 AM
Sequence Name: : 06062016

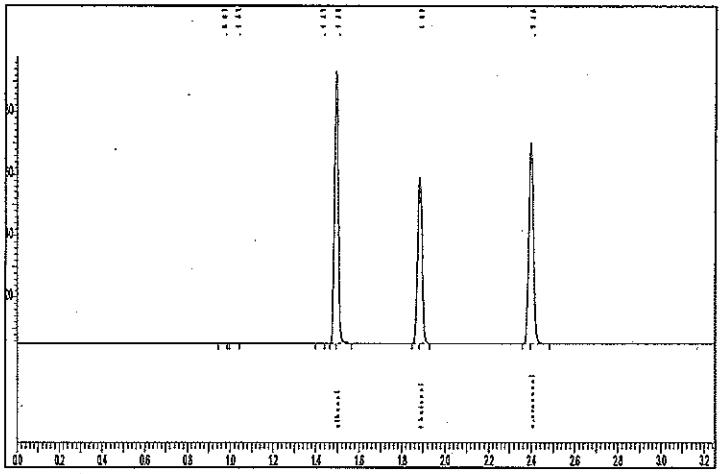
Inst Method : c:\tc data\methods\alc gc method.mth
Report : C:\TC Data\Methods\ALCreport.tpm

Channel A:
Result File : C:\TC Data\Data\06062016\06062016A006-20160606-115415.rst
Proc Method : c:\tc data\data\06062016\alc a cal 06062016.mth
Cal Method : c:\tc data\data\06062016\alc a cal 06062016.mth

Channel B:
Result File : C:\TC Data\Data\06062016\06062016B006-20160606-115415.rst
Proc Method : c:\tc data\data\06062016\alc b cal 06062016.mth
Cal Method : c:\tc data\data\06062016\alc b cal 06062016.mth



Channel A Chromatogram



Channel B Chromatogram

Peak #	Ret (min)	Compound	Area	Amount (g/100 ml)
3	1.601	ethanol	113970	0.2012
4	2.321	t-butanol	78751	0.9919
5	2.703	n-propanol	103704	1.0000

Peak #	Ret (min)	Compound	Area	Amount (g/100 ml)
4	1.493	ethanol	111703	0.2002
5	1.883	t-butanol	78175	0.9859
6	2.397	n-propanol	101687	1.0000

Sequence : C:\TC Data\Data\06062016\ALC cal 06062016.seq

Sample Name : STD F
Data Acquisition : Jun 06, 2016 at 11:15:12 AM
Cycle : 7

Instrument Name : Clarus 580 GC
Report Date : Jun 06, 2016 at 11:55:35 AM
Sequence Name: : 06062016

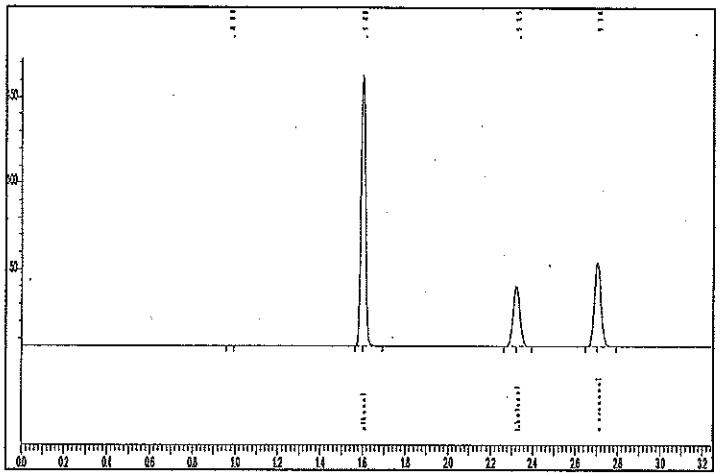
Inst Method : c:\tc data\methods\alc gc method.mth
Report : C:\TC Data\Methods\ALCreport.tpm

Channel A:

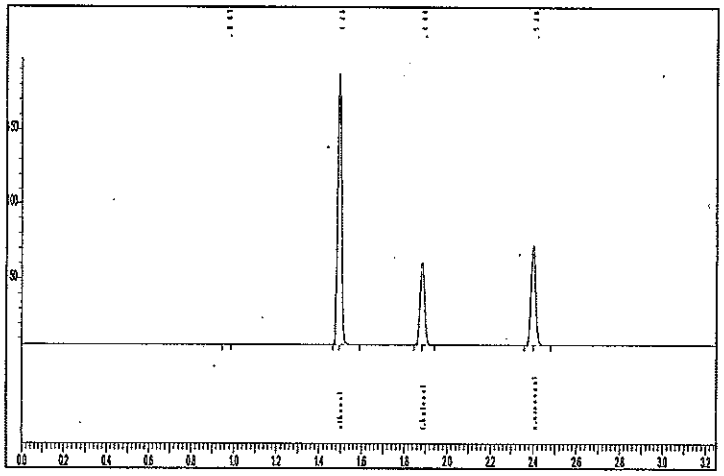
Result File : C:\TC Data\Data\06062016\06062016A007-20160606-115415.rst
Proc Method : c:\tc data\data\06062016\alc a cal 06062016.mth
Cal Method : c:\tc data\data\06062016\alc a cal 06062016.mth

Channel B:

Result File : C:\TC Data\Data\06062016\06062016B007-20160606-115416.rst
Proc Method : c:\tc data\data\06062016\alc b cal 06062016.mth
Cal Method : c:\tc data\data\06062016\alc b cal 06062016.mth



Channel A Chromatogram



Channel B Chromatogram

Peak #	Ret (min)	Compound	Area	Amount (g/100 ml)
2	1.601	ethanol	236603	0.4061
3	2.322	t-butanol	81520	0.9994
4	2.704	n-propanol	106548	1.0000

Peak #	Ret (min)	Compound	Area	Amount (g/100 ml)
2	1.494	ethanol	232297	0.4040
3	1.883	t-butanol	81448	0.9980
4	2.398	n-propanol	104658	1.0000

Sequence : C:\TC Data\Data\06062016\ALC cal 06062016.seq

Sample Name : BLANK
Data Acquisition : Jun 06, 2016 at 11:25:13 AM
Cycle : 8

Instrument Name : Clarus 580 GC
Report Date : Jun 06, 2016 at 11:55:35 AM
Sequence Name: : 06062016

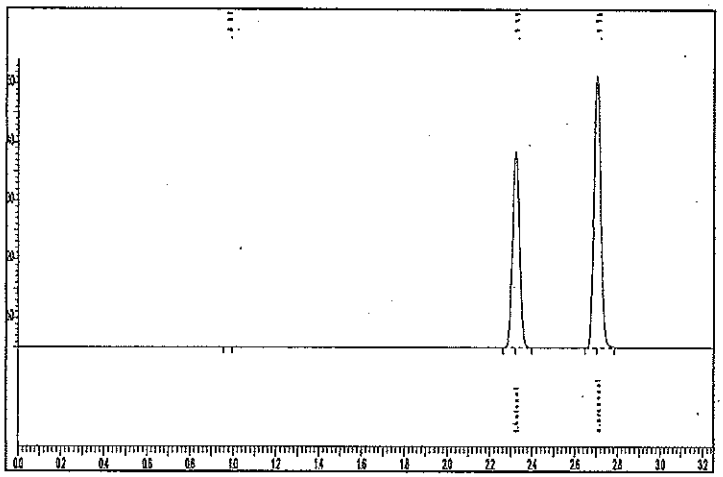
Inst Method : c:\tc data\methods\alc gc method.mth
Report : C:\TC Data\Methods\ALCreport.tpm

Channel A:

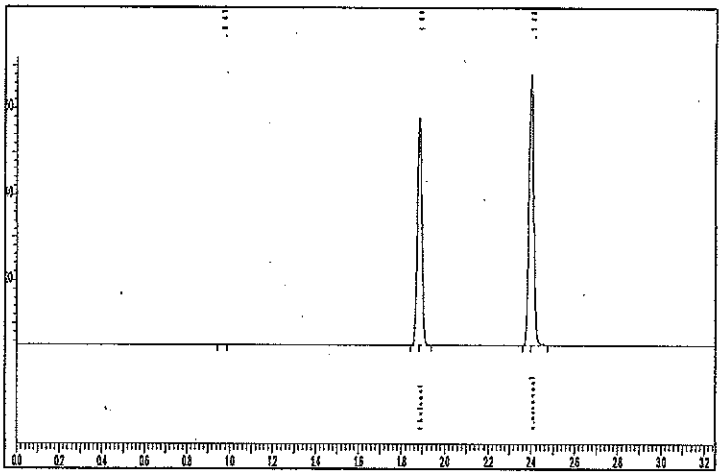
Result File : C:\TC Data\Data\06062016\06062016A008-20160606-115416.rst
Proc Method : c:\tc data\data\06062016\alc a cal 06062016.mth
Cal Method : c:\tc data\data\06062016\alc a cal 06062016.mth

Channel B:

Result File : C:\TC Data\Data\06062016\06062016B008-20160606-115416.rst
Proc Method : c:\tc data\data\06062016\alc b cal 06062016.mth
Cal Method : c:\tc data\data\06062016\alc b cal 06062016.mth



Channel A Chromatogram



Channel B Chromatogram

Peak #	Ret (min)	Compound	Area	Amount (g/100 ml)
2	2.322	t-butanol	77658	1.0024
3	2.704	n-propanol	101203	1.0000

Peak #	Ret (min)	Compound	Area	Amount (g/100 ml)
2	1.883	t-butanol	77483	1.0048
3	2.398	n-propanol	98894	1.0000

QC samples must be labeled "AQ" for aqueous or "WB" for whole blood controls
Control check samples must be labeled "CCS 05" for 0.050% ethanol or "CCS 20" for 0.200% ethanol
If QC or CCS fail and should not be included in final calculations, enter an asterisk (*) before the sample name
Case samples must be formatted as the V number and item number in FA, e.g. "V15-1234 A1-1"

COPY AND PASTE DATA OUTPUT BELOW

Channel	Cycle	Sample	Peak Name	Peak #	RT	Peak Area	IS Area	Concentration
A		1 BLANK	ethanol				100147	
B		1 BLANK	ethanol				97851	
A		2 TMX	ethanol	4	1.602	44654	104104	0.0788
B		2 TMX	ethanol	4	1.493	43984	102008	0.0789
A		3 WB	ethanol	3	1.601	43644	101631	0.0789
B		3 WB	ethanol	3	1.493	43021	99356	0.0792
A		4 WB	ethanol	3	1.602	45387	107494	0.0776
B		4 WB	ethanol	3	1.493	44647	105267	0.0776
A		5 AQ	ethanol	2	1.602	45341	104999	0.0793
B		5 AQ	ethanol	2	1.494	44649	103002	0.0793
A		6 AQ	ethanol	2	1.602	45051	102861	0.0804
B		6 AQ	ethanol	2	1.493	44313	100780	0.0804
A		7 CCS 05	ethanol	2	1.602	27715	102273	0.0499
B		7 CCS 05	ethanol	2	1.494	27217	99913	0.05
A		8 CCS 05	ethanol	2	1.602	28175	105420	0.0492
B		8 CCS 05	ethanol	2	1.494	27641	103217	0.0492
A		9 V16-1080 A1-1	ethanol	5	1.601	98064	121484	0.1479
B		9 V16-1080 A1-1	ethanol	6	1.493	96771	119515	0.1477
A		10 V16-1080 A1-1	ethanol	4	1.601	100355	126397	0.1455
B		10 V16-1080 A1-1	ethanol	7	1.493	99296	124105	0.146
A		11 V16-1084 A1-1	ethanol	3	1.601	68690	109065	0.1155
B		11 V16-1084 A1-1	ethanol	4	1.493	67783	106941	0.1157
A		12 V16-1084 A1-1	ethanol	4	1.601	68576	110666	0.1136
B		12 V16-1084 A1-1	ethanol	6	1.493	67464	108527	0.1135
A		13 V16-1086 A1-1	ethanol	4	1.601	114799	112611	0.1867
B		13 V16-1086 A1-1	ethanol	5	1.493	112851	110297	0.1865
A		14 V16-1086 A1-1	ethanol	5	1.601	110341	108285	0.1866
B		14 V16-1086 A1-1	ethanol	7	1.493	108827	106494	0.1863
A		15 V ~~Cliniqa~~ 0.5 Lot (	ethanol	6	1.601	286550	103543	0.506
B		15 V ~~Cliniqa~~ 0.5 Lot (	ethanol	10	1.494	281588	102149	0.5016
A		16 V ~~Cliniqa~~ 0.5 Lot (	ethanol	3	1.601	298739	107624	0.5075
B		16 V ~~Cliniqa~~ 0.5 Lot (	ethanol	4	1.494	293454	106014	0.5037
A		17 V 1:1 Dil. of ~~Clinic~~	ethanol	2	1.601	146066	106163	0.2518
B		17 V 1:1 Dil. of ~~Clinic~~	ethanol	2	1.493	143506	104362	0.2505
A		18 V 1:1 Dil. of ~~Clinic~~	ethanol	2	1.601	143657	104024	0.2527
B		18 V 1:1 Dil. of ~~Clinic~~	ethanol	2	1.493	141261	102341	0.2514
A		19 CCS 20	ethanol	2	1.602	118093	108057	0.2001
B		19 CCS 20	ethanol	2	1.494	116378	106362	0.1994
A		20 CCS 20	ethanol	2	1.601	110494	99692	0.2029
B		20 CCS 20	ethanol	2	1.493	108717	98051	0.2021
A		21 BLANK	ethanol				107253	
B		21 BLANK	ethanol				105172	

Ceriliant
JSD 6/10/16

FN07031402 JSD 15

Quality Control Summary Sheet

Batch: 06092016 Analyst: JSD Run date: 6/9/16

Material	Replicate 1 Channel A	Replicate 1 Channel B	Replicate 2 Channel A	Replicate 2 Channel B	Mean	-5%	+5%	%CV	Target	Recovery
Whole Blood	0.0789	0.0792	0.0776	0.0776	0.0783	0.0744	0.0822	1.08%	0.078	100.0%
Aqueous Control	0.0793	0.0793	0.0804	0.0804	0.0799	0.0759	0.0839	0.79%	0.080	98.8%
0.05% CCS	0.0499	0.0500	0.0492	0.0492	0.0496	0.0471	0.0521	0.88%	0.050	98.0%
0.20% CCS	0.2001	0.1994	0.2029	0.2021	0.2011	0.1910	0.2112	0.82%	0.200	100.5%

Sequence : C:\TC Data\Data\06092016\ALC batch 06092016.seq

Study Name : 06092016 **Instrument Name** : Clarus 580 GC
Data Acquisition : Jun 09, 2016 at 11:59:12 AM **Report Date** : Jun 10, 2016 at 07:09:47 AM

Column A

Cycle	Sample	Instrument Method	Processing Method	Result File
1	BLANK	alc gc method.mth	alc a cal 06062016.mth	06092016A001.rst
2	TMX	alc gc method.mth	alc a cal 06062016.mth	06092016A002.rst
3	WB	alc gc method.mth	alc a cal 06062016.mth	06092016A003.rst
4	WB	alc gc method.mth	alc a cal 06062016.mth	06092016A004.rst
5	AQ	alc gc method.mth	alc a cal 06062016.mth	06092016A005.rst
6	AQ	alc gc method.mth	alc a cal 06062016.mth	06092016A006.rst
7	CCS 05	alc gc method.mth	alc a cal 06062016.mth	06092016A007.rst
8	CCS 05	alc gc method.mth	alc a cal 06062016.mth	06092016A008.rst
9	V16-1080 A1-1	alc gc method.mth	alc a cal 06062016.mth	06092016A009.rst
10	V16-1080 A1-1	alc gc method.mth	alc a cal 06062016.mth	06092016A010.rst
11	V16-1084 A1-1	alc gc method.mth	alc a cal 06062016.mth	06092016A011.rst
12	V16-1084 A1-1	alc gc method.mth	alc a cal 06062016.mth	06092016A012.rst
13	V16-1086 A1-1	alc gc method.mth	alc a cal 06062016.mth	06092016A013.rst
14	V16-1086 A1-1	alc gc method.mth	alc a cal 06062016.mth	06092016A014.rst
15	~~Cliniqa~~ 0.5 Lot 07031402	alc gc method.mth	alc a cal 06062016.mth	06092016A015.rst
16	~~Cliniqa~~ 0.5 Lot 07031402	alc gc method.mth	alc a cal 06062016.mth	06092016A016.rst
17	1:1 Dil. of ~~Cliniqa~~ 0.5 Lot 07031402	alc gc method.mth	alc a cal 06062016.mth	06092016A017.rst
18	1:1 Dil. of ~~Cliniqa~~ 0.5 Lot 07031402	alc gc method.mth	alc a cal 06062016.mth	06092016A018.rst
19	CCS 20	alc gc method.mth	alc a cal 06062016.mth	06092016A019.rst
20	CCS 20	alc gc method.mth	alc a cal 06062016.mth	06092016A020.rst
21	BLANK	alc gc method.mth	alc a cal 06062016.mth	06092016A021.rst

Cerilliant JSD 6/10/16

Column B

Cycle	Sample	Instrument Method	Processing Method	Result File
1	BLANK	alc gc method.mth	alc b cal 06062016.mth	06092016B001.rst
2	TMX	alc gc method.mth	alc b cal 06062016.mth	06092016B002.rst
3	WB	alc gc method.mth	alc b cal 06062016.mth	06092016B003.rst
4	WB	alc gc method.mth	alc b cal 06062016.mth	06092016B004.rst
5	AQ	alc gc method.mth	alc b cal 06062016.mth	06092016B005.rst
6	AQ	alc gc method.mth	alc b cal 06062016.mth	06092016B006.rst
7	CCS 05	alc gc method.mth	alc b cal 06062016.mth	06092016B007.rst
8	CCS 05	alc gc method.mth	alc b cal 06062016.mth	06092016B008.rst
9	V16-1080 A1-1	alc gc method.mth	alc b cal 06062016.mth	06092016B009.rst
10	V16-1080 A1-1	alc gc method.mth	alc b cal 06062016.mth	06092016B010.rst

Sequence : C:\TC Data\Data\06092016\ALC batch 06092016.seq

Cycle	Sample	Instrument Method	Processing Method	Result File
11	V16-1084 A1-1	alc gc method.mth	alc b cal 06062016.mth	06092016B011.rst
12	V16-1084 A1-1	alc gc method.mth	alc b cal 06062016.mth	06092016B012.rst
13	V16-1086 A1-1	alc gc method.mth	alc b cal 06062016.mth	06092016B013.rst
14	V16-1086 A1-1	alc gc method.mth	alc b cal 06062016.mth	06092016B014.rst
15	~~Cliniqa~~ 0.5 Lot 07031402	alc gc method.mth	alc b cal 06062016.mth	06092016B015.rst
16	~~Cliniqa~~ 0.5 Lot 07031402	alc gc method.mth	alc b cal 06062016.mth	06092016B016.rst
17	1:1 Dil. of ~~Cliniqa~~ 0.5 Lot 07031402	alc gc method.mth	alc b cal 06062016.mth	06092016B017.rst
18	1:1 Dil. of ~~Cliniqa~~ 0.5 Lot 07031402	alc gc method.mth	alc b cal 06062016.mth	06092016B018.rst
19	CCS 20	alc gc method.mth	alc b cal 06062016.mth	06092016B019.rst
20	CCS 20	alc gc method.mth	alc b cal 06062016.mth	06092016B020.rst
21	BLANK	alc gc method.mth	alc b cal 06062016.mth	06092016B021.rst

Cerilliant 350 6/15/16

Sequence : C:\TC Data\Data\06092016\ALC batch 06092016.seq

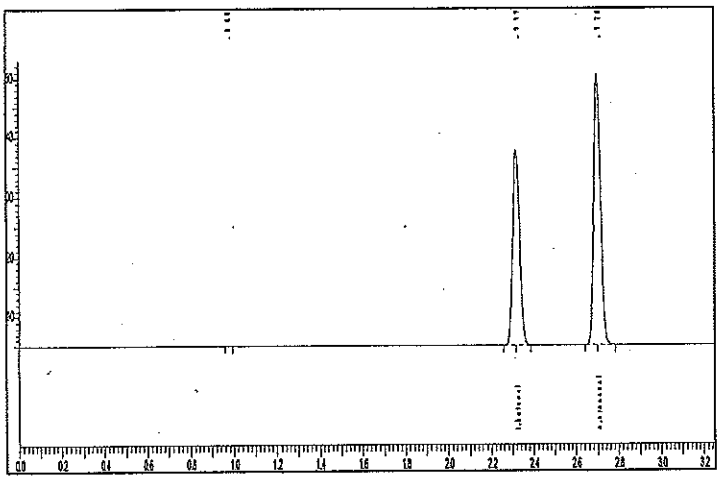
Sample Name : BLANK
Data Acquisition : Jun 09, 2016 at 11:59:12 AM
Cycle : 1

Instrument Name : Clarus 580 GC
Report Date : Jun 10, 2016 at 07:09:40 AM
Sequence Name: : 06092016

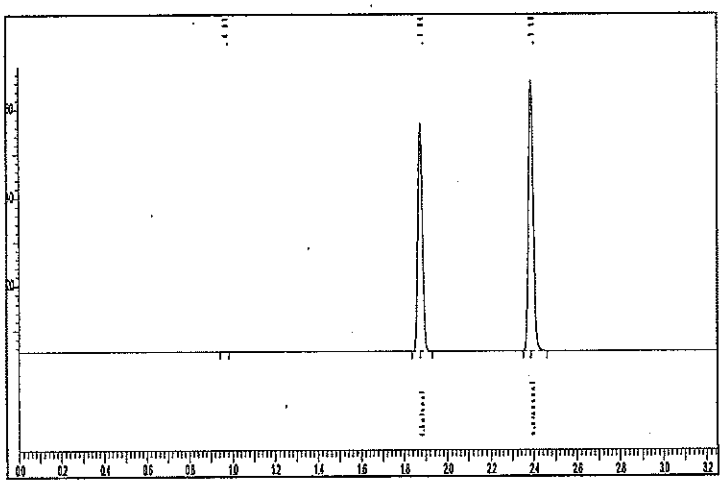
Inst Method : c:\tc data\methods\alc gc method.mth
Report : C:\TC Data\Methods\ALCreport.tpm

Channel A:
Result File : C:\TC Data\Data\06092016\06092016A001.rst
Proc Method : c:\tc data\data\06062016\alc a cal 06062016.mth
Cal Method : c:\tc data\data\06062016\alc a cal 06062016.mth

Channel B:
Result File : C:\TC Data\Data\06092016\06092016B001.rst
Proc Method : c:\tc data\data\06062016\alc b cal 06062016.mth
Cal Method : c:\tc data\data\06062016\alc b cal 06062016.mth



Channel A Chromatogram



Channel B Chromatogram

Peak #	Ret (min)	Compound	Area	Amount (g/100 ml)
2	2.319	t-butanol	75546	0.9854
3	2.701	n-propanol	100147	1.0000

Peak #	Ret (min)	Compound	Area	Amount (g/100 ml)
2	1.877	t-butanol	75580	0.9906
3	2.389	n-propanol	97851	1.0000

Sequence : C:\TC Data\Data\06092016\ALC batch 06092016.seq

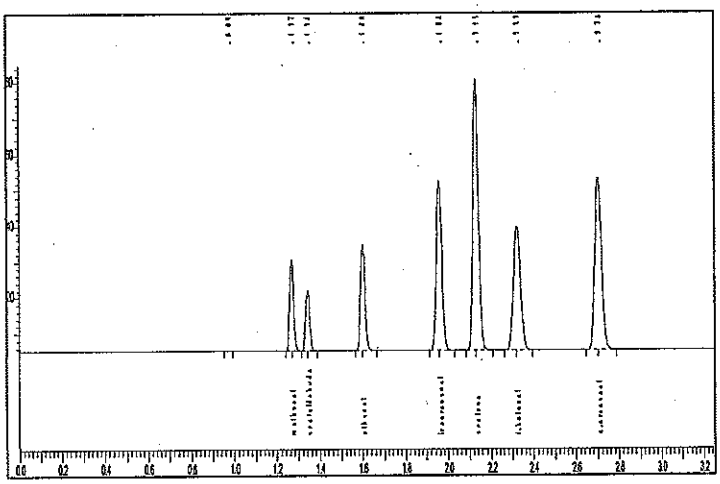
Sample Name : TMX
Data Acquisition : Jun 09, 2016 at 12:09:12 PM
Cycle : 2

Instrument Name : Clarus 580 GC
Report Date : Jun 10, 2016 at 07:09:40 AM
Sequence Name: : 06092016

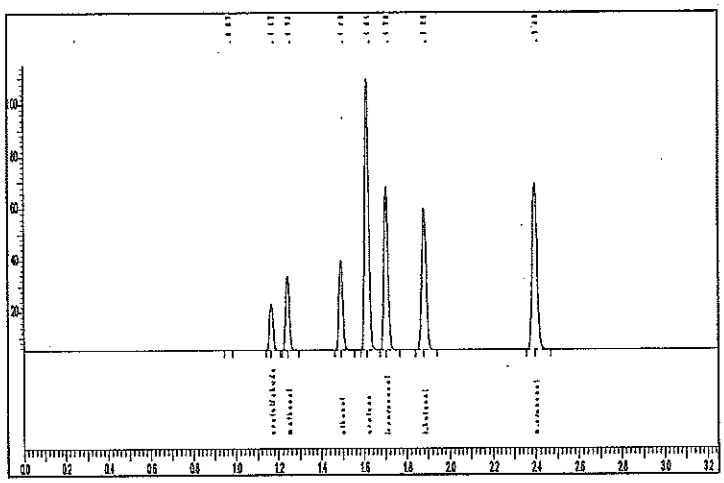
Inst Method : c:\tc data\methods\alc gc method.mth
Report : C:\TC Data\Methods\ALCreport.tpm

Channel A:
Result File : C:\TC Data\Data\06092016\06092016A002.rst
Proc Method : c:\tc data\data\06062016\alc a cal 06062016.mth
Cal Method : c:\tc data\data\06062016\alc a cal 06062016.mth

Channel B:
Result File : C:\TC Data\Data\06092016\06092016B002.rst
Proc Method : c:\tc data\data\06062016\alc b cal 06062016.mth
Cal Method : c:\tc data\data\06062016\alc b cal 06062016.mth



Channel A Chromatogram



Channel B Chromatogram

Peak #	Ret (min)	Compound	Area	Amount (g/100 ml)
2	1.269	methanol	34608	0.1183
3	1.343	acetaldehyde	22210	0.0718
4	1.602	ethanol	44654	0.0788
5	1.958	isopropanol	85087	0.0794
6	2.131	acetone	137747	0.0583
7	2.322	t-butanol	79749	1.0007
8	2.704	n-propanol	104104	1.0000

Peak #	Ret (min)	Compound	Area	Amount (g/100 ml)
2	1.167	acetaldehyde	22121	0.0645
3	1.243	methanol	34341	0.1169
4	1.493	ethanol	43984	0.0789
5	1.614	acetone	136766	0.0581
6	1.705	isopropanol	84210	0.0785
7	1.882	t-butanol	79709	1.0021
8	2.396	n-propanol	102008	1.0000

Sequence : C:\TC Data\Data\06092016\ALC batch 06092016.seq

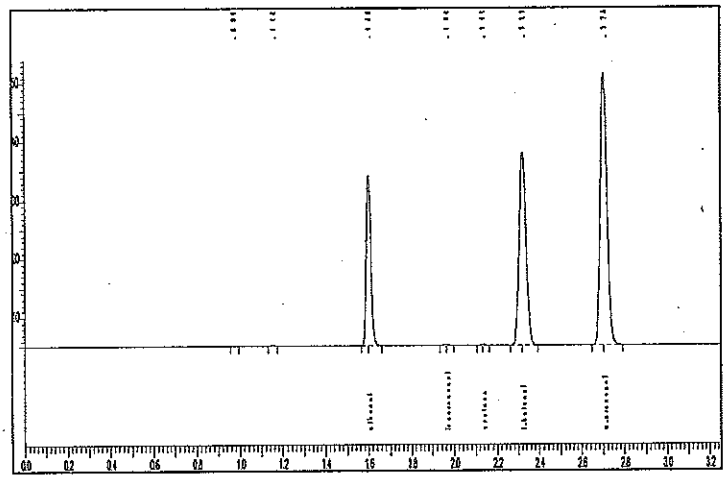
Sample Name : WB
Data Acquisition : Jun 09, 2016 at 12:19:12 PM
Cycle : 3

Instrument Name : Clarus 580 GC
Report Date : Jun 10, 2016 at 07:09:40 AM
Sequence Name: : 06092016

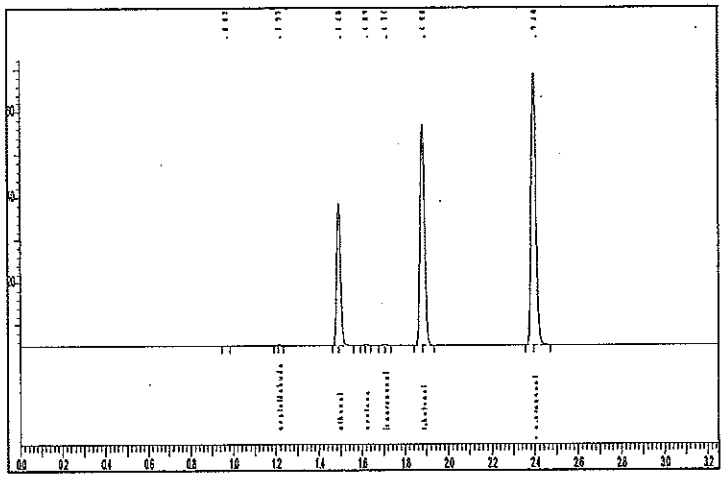
Inst Method : c:\tc data\methods\alc gc method.mth
Report : C:\TC Data\Methods\ALCreport.tpm

Channel A:
Result File : C:\TC Data\Data\06092016\06092016A003.rst
Proc Method : c:\tc data\data\06062016\alc a cal 06062016.mth
Cal Method : c:\tc data\data\06062016\alc a cal 06062016.mth

Channel B:
Result File : C:\TC Data\Data\06092016\06092016B003.rst
Proc Method : c:\tc data\data\06062016\alc b cal 06062016.mth
Cal Method : c:\tc data\data\06062016\alc b cal 06062016.mth



Channel A Chromatogram



Channel B Chromatogram

Peak #	Ret (min)	Compound	Area	Amount (g/100 ml)
3	1.601	ethanol	43644	0.0789
6	2.322	t-butanol	76407	0.9821
7	2.704	n-propanol	101631	1.0000

Peak #	Ret (min)	Compound	Area	Amount (g/100 ml)
3	1.493	ethanol	43021	0.0792
6	1.882	t-butanol	76299	0.9848
7	2.397	n-propanol	99356	1.0000

Sequence : C:\TC Data\Data\06092016\ALC batch 06092016.seq

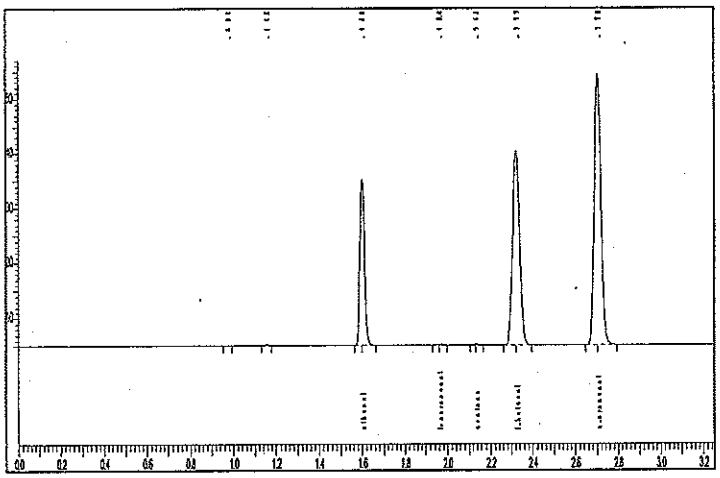
Sample Name : WB
Data Acquisition : Jun 09, 2016 at 12:29:11 PM
Cycle : 4

Instrument Name : Clarus 580 GC
Report Date : Jun 10, 2016 at 07:09:40 AM
Sequence Name: : 06092016

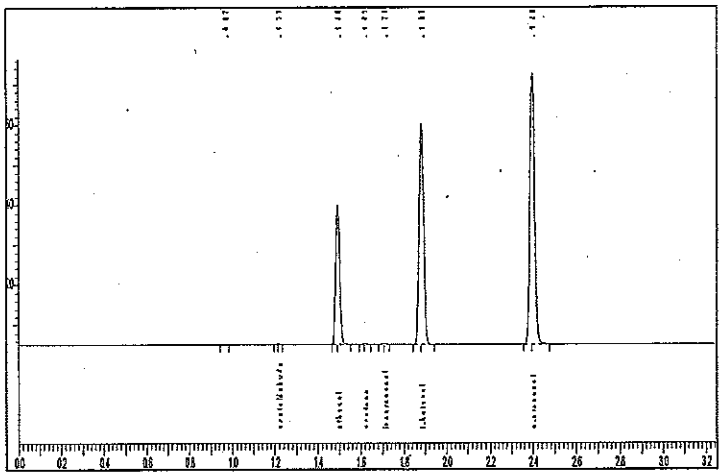
Inst Method : c:\tc data\methods\alc gc method.mth
Report : C:\TC Data\Methods\ALCreport.tpm

Channel A:
Result File : C:\TC Data\Data\06092016\06092016A004.rst
Proc Method : c:\tc data\data\06062016\alc a cal 06062016.mth
Cal Method : c:\tc data\data\06062016\alc a cal 06062016.mth

Channel B:
Result File : C:\TC Data\Data\06092016\06092016B004.rst
Proc Method : c:\tc data\data\06062016\alc b cal 06062016.mth
Cal Method : c:\tc data\data\06062016\alc b cal 06062016.mth



Channel A Chromatogram



Channel B Chromatogram

Peak #	Ret (min)	Compound	Area	Amount (g/100 ml)
3	1.602	ethanol	45387	0.0776
6	2.323	t-butanol	81159	0.9862
7	2.704	n-propanol	107494	1.0000

Peak #	Ret (min)	Compound	Area	Amount (g/100 ml)
3	1.493	ethanol	44647	0.0776
6	1.883	t-butanol	81181	0.9890
7	2.398	n-propanol	105267	1.0000

Sequence : C:\TC Data\Data\06092016\ALC batch 06092016.seq

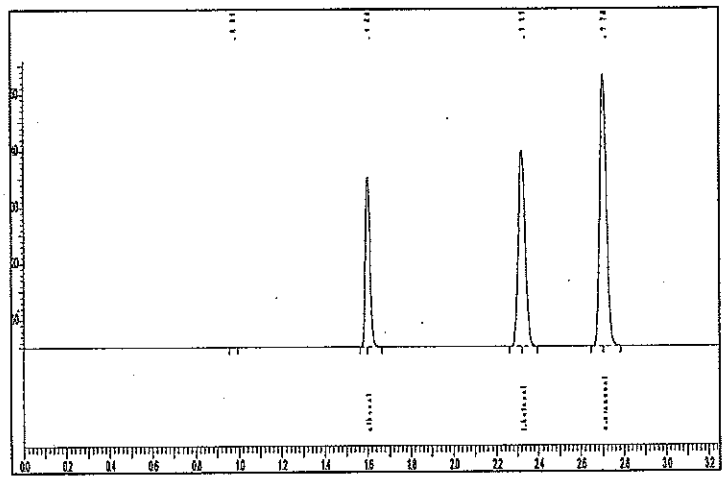
Sample Name : AQ
Data Acquisition : Jun 09, 2016 at 12:39:12 PM
Cycle : 5

Instrument Name : Clarus 580 GC
Report Date : Jun 10, 2016 at 07:09:40 AM
Sequence Name: : 06092016

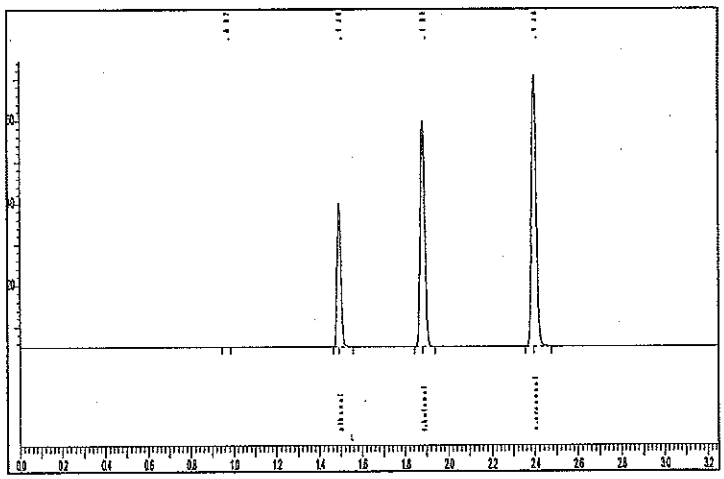
Inst Method : c:\tc data\methods\alc gc method.mth
Report : C:\TC Data\Methods\ALCreport.tpm

Channel A:
Result File : C:\TC Data\Data\06092016\06092016A005.rst
Proc Method : c:\tc data\data\06062016\alc a cal 06062016.mth
Cal Method : c:\tc data\data\06062016\alc a cal 06062016.mth

Channel B:
Result File : C:\TC Data\Data\06092016\06092016B005.rst
Proc Method : c:\tc data\data\06062016\alc b cal 06062016.mth
Cal Method : c:\tc data\data\06062016\alc b cal 06062016.mth



Channel A Chromatogram



Channel B Chromatogram

Peak #	Ret (min)	Compound	Area	Amount (g/100 ml)
2	1.602	ethanol	45341	0.0793
3	2.322	t-butanol	80137	0.9970
4	2.705	n-propanol	104999	1.0000

Peak #	Ret (min)	Compound	Area	Amount (g/100 ml)
2	1.494	ethanol	44649	0.0793
3	1.883	t-butanol	80072	0.9970
4	2.398	n-propanol	103002	1.0000

Sequence : C:\TC Data\Data\06092016\ALC batch 06092016.seq

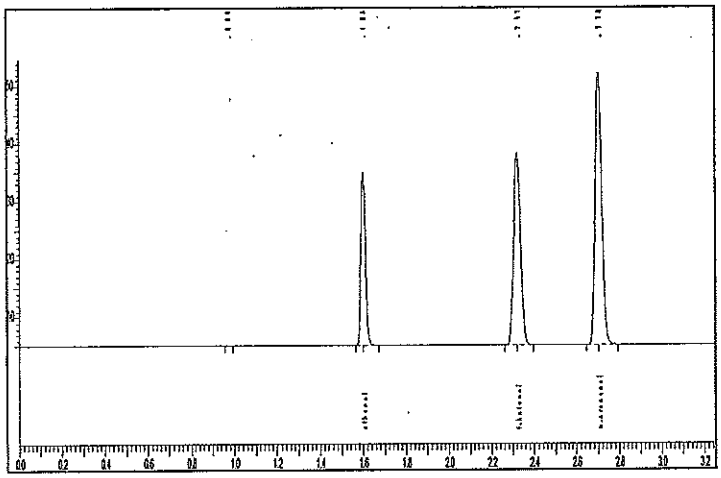
Sample Name : AQ
Data Acquisition : Jun 09, 2016 at 12:49:12 PM
Cycle : 6

Instrument Name : Clarus 580 GC
Report Date : Jun 10, 2016 at 07:09:40 AM
Sequence Name: : 06092016

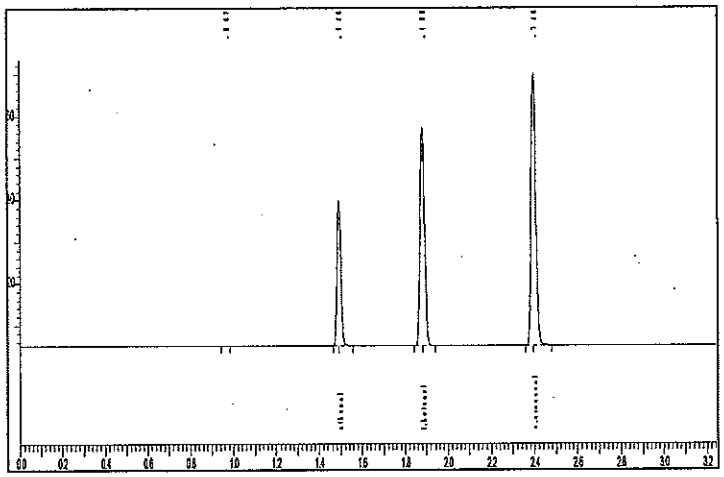
Inst Method : c:\tc data\methods\alc gc method.mth
Report : C:\TC Data\Methods\ALCreport.tpm

Channel A:
Result File : C:\TC Data\Data\06092016\06092016A006.rst
Proc Method : c:\tc data\data\06062016\alc a cal 06062016.mth
Cal Method : c:\tc data\data\06062016\alc a cal 06062016.mth

Channel B:
Result File : C:\TC Data\Data\06092016\06092016B006.rst
Proc Method : c:\tc data\data\06062016\alc b cal 06062016.mth
Cal Method : c:\tc data\data\06062016\alc b cal 06062016.mth



Channel A Chromatogram



Channel B Chromatogram

Peak #	Ret (min)	Compound	Area	Amount (g/100 ml)
2	1.602	ethanol	45051	0.0804
3	2.322	t-butanol	76382	0.9700
4	2.705	n-propanol	102861	1.0000

Peak #	Ret (min)	Compound	Area	Amount (g/100 ml)
2	1.493	ethanol	44313	0.0804
3	1.883	t-butanol	76381	0.9720
4	2.398	n-propanol	100780	1.0000

Sequence : C:\TC Data\Data\06092016\ALC batch 06092016.seq

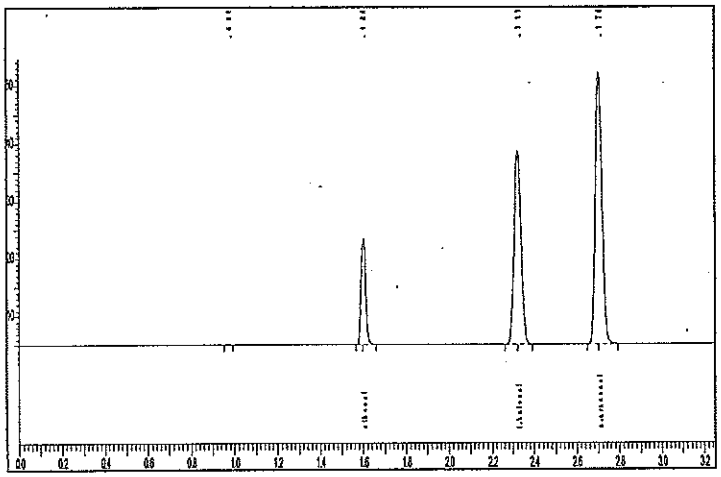
Sample Name : CCS 05
Data Acquisition : Jun 09, 2016 at 12:59:12 PM
Cycle : 7

Instrument Name : Clarus 580 GC
Report Date : Jun 10, 2016 at 07:09:40 AM
Sequence Name: : 06092016

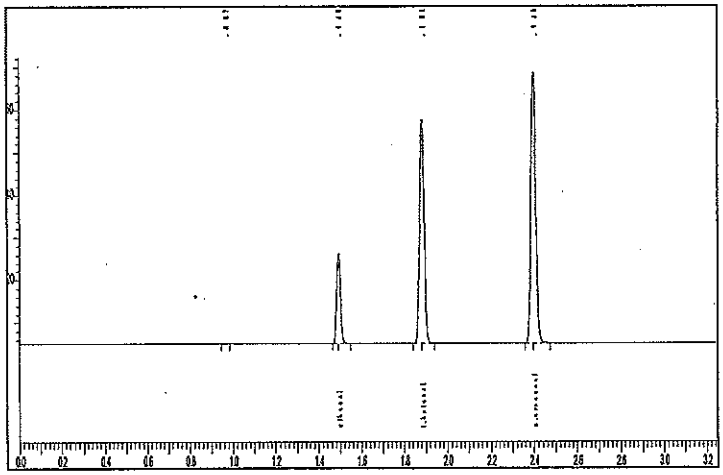
Inst Method : c:\tc data\methods\alc gc method.mth
Report : C:\TC Data\Methods\ALCreport.tpm

Channel A:
Result File : C:\TC Data\Data\06092016\06092016A007.rst
Proc Method : c:\tc data\data\06062016\alc a cal 06062016.mth
Cal Method : c:\tc data\data\06062016\alc a cal 06062016.mth

Channel B:
Result File : C:\TC Data\Data\06092016\06092016B007.rst
Proc Method : c:\tc data\data\06062016\alc b cal 06062016.mth
Cal Method : c:\tc data\data\06062016\alc b cal 06062016.mth



Channel A Chromatogram



Channel B Chromatogram

Peak #	Ret (min)	Compound	Area	Amount (g/100 ml)
2	1.602	ethanol	27715	0.0499
3	2.323	t-butanol	77441	0.9891
4	2.705	n-propanol	102273	1.0000

Peak #	Ret (min)	Compound	Area	Amount (g/100 ml)
2	1.494	ethanol	27217	0.0500
3	1.883	t-butanol	77398	0.9935
4	2.398	n-propanol	99913	1.0000

Sequence : C:\TC Data\Data\06092016\ALC batch 06092016.seq

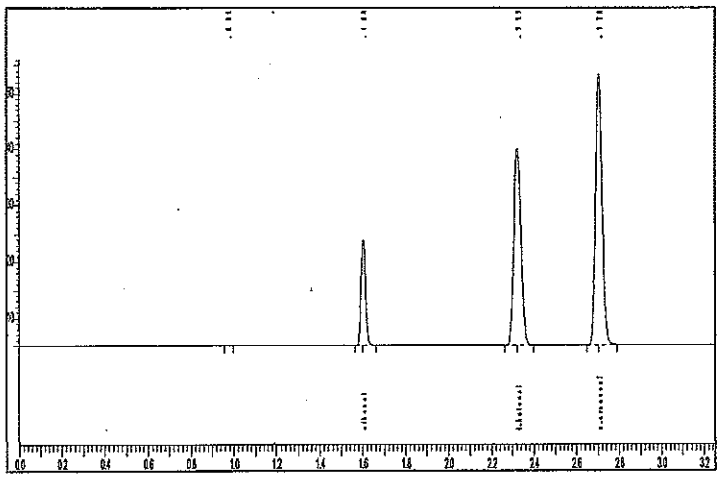
Sample Name : CCS 05
Data Acquisition : Jun 09, 2016 at 01:09:13 PM
Cycle : 8

Instrument Name : Clarus 580 GC
Report Date : Jun 10, 2016 at 07:09:40 AM
Sequence Name: : 06092016

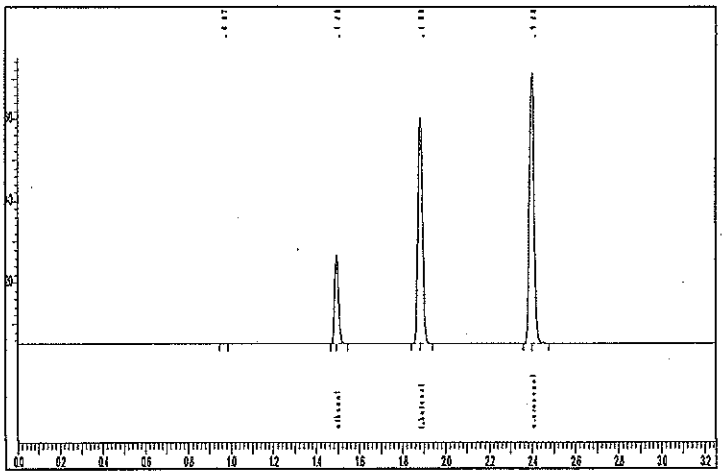
Inst Method : c:\tc data\methods\alc gc method.mth
Report : C:\TC Data\Methods\ALCreport.tpm

Channel A:
Result File : C:\TC Data\Data\06092016\06092016A008.rst
Proc Method : c:\tc data\data\06062016\alc a cal 06062016.mth
Cal Method : c:\tc data\data\06062016\alc a cal 06062016.mth

Channel B:
Result File : C:\TC Data\Data\06092016\06092016B008.rst
Proc Method : c:\tc data\data\06062016\alc b cal 06062016.mth
Cal Method : c:\tc data\data\06062016\alc b cal 06062016.mth



Channel A Chromatogram



Channel B Chromatogram

Peak #	Ret (min)	Compound	Area	Amount (g/100 ml)
2	1.602	ethanol	28175	0.0492
3	2.323	t-butanol	80882	1.0022
4	2.705	n-propanol	105420	1.0000

Peak #	Ret (min)	Compound	Area	Amount (g/100 ml)
2	1.494	ethanol	27641	0.0492
3	1.883	t-butanol	80739	1.0032
4	2.398	n-propanol	103217	1.0000

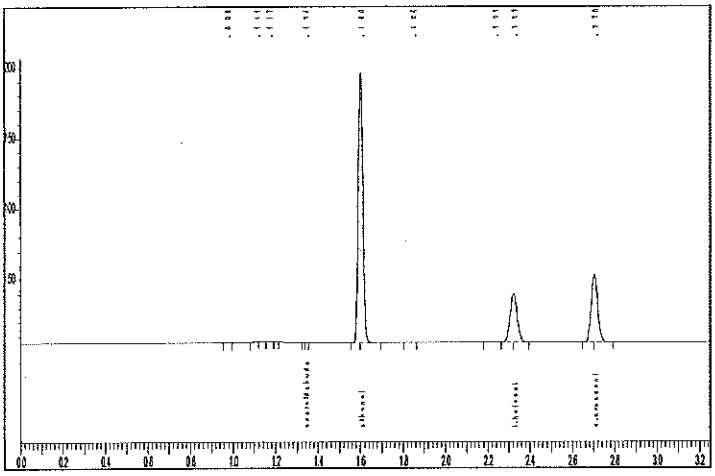
Sequence : C:\TC Data\Data\06092016\ALC batch 06092016.seq
Cerilliant JSO 6/10/16

Sample Name : ~~Cliniqa~~ 0.5 Lot ~~07031402~~ FN0703/402 JSO
Instrument Name : Clarus 580 GC
Data Acquisition : Jun 09, 2016 at 02:19:14 PM 6/10/16
Report Date : Jun 10, 2016 at 07:09:40 AM
Cycle : 15
Sequence Name: : 06092016

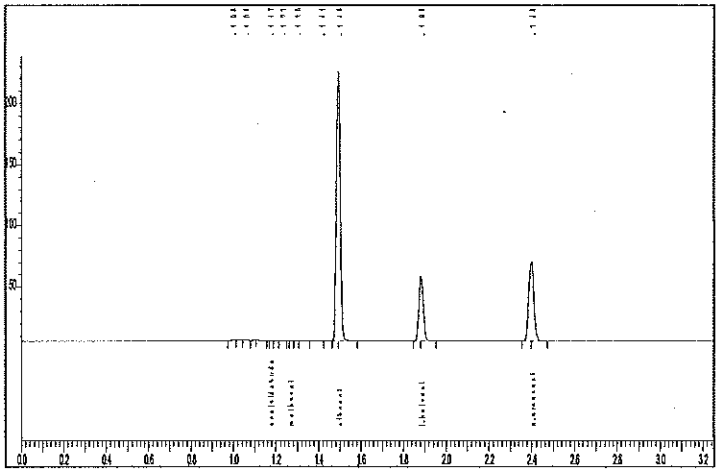
Inst Method : c:\tc data\methods\alc gc method.mth
Report : C:\TC Data\Methods\ALCreport.tpm

Channel A:
Result File : C:\TC Data\Data\06092016\06092016A015.rst
Proc Method : c:\tc data\data\06062016\alc a cal 06062016.mth
Cal Method : c:\tc data\data\06062016\alc a cal 06062016.mth

Channel B:
Result File : C:\TC Data\Data\06092016\06092016B015.rst
Proc Method : c:\tc data\data\06062016\alc b cal 06062016.mth
Cal Method : c:\tc data\data\06062016\alc b cal 06062016.mth



Channel A Chromatogram



Channel B Chromatogram

Peak #	Ret (min)	Compound	Area	Amount (g/100 ml)
6	1.601	ethanol	286550	0.5060
9	2.323	t-butanol	79418	1.0019
10	2.705	n-propanol	103543	1.0000

Peak #	Ret (min)	Compound	Area	Amount (g/100 ml)
10	1.494	ethanol	281588	0.5016
11	1.883	t-butanol	78618	0.9870
12	2.399	n-propanol	102149	1.0000

Sequence : C:\TC Data\Data\06092016\ALC batch 06092016.seq
Cerilliant JSD 6/10/16

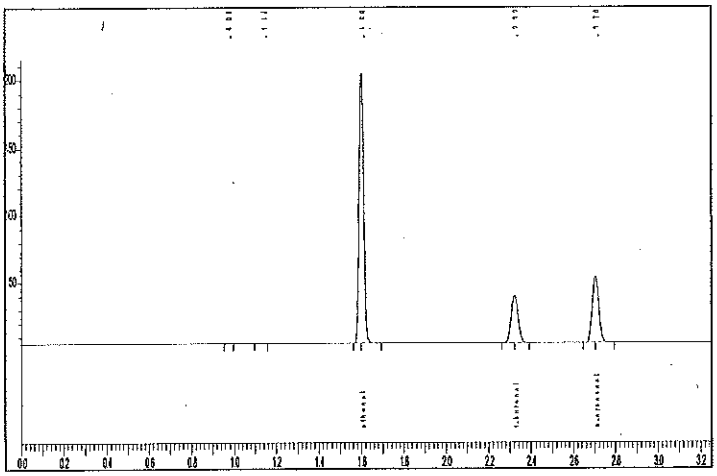
Sample Name : ~~Cliniqa~~ 0.5 Lot ~~07031402~~ FN07031402 JSD 6/10/16
Data Acquisition : Jun 09, 2016 at 02:29:14 PM
Cycle : 16

Instrument Name : Clarus 580 GC
Report Date : Jun 10, 2016 at 07:09:40 AM
Sequence Name: : 06092016

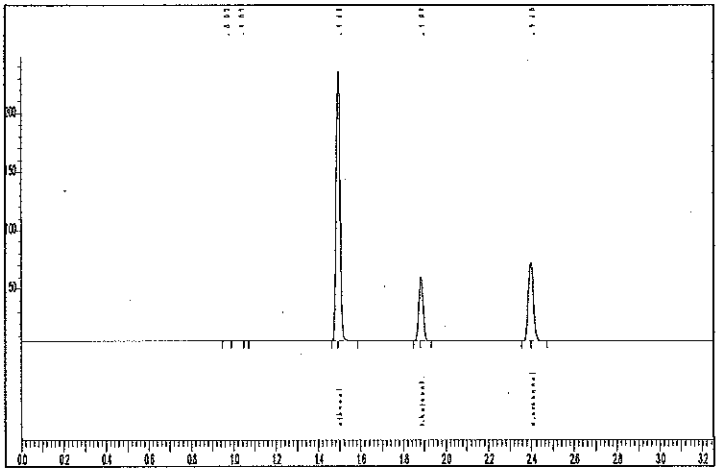
Inst Method : c:\tc data\methods\alc gc method.mth
Report : C:\TC Data\Methods\ALCreport.tpm

Channel A:
Result File : C:\TC Data\Data\06092016\06092016A016.rst
Proc Method : c:\tc data\data\06062016\alc a cal 06062016.mth
Cal Method : c:\tc data\data\06062016\alc a cal 06062016.mth

Channel B:
Result File : C:\TC Data\Data\06092016\06092016B016.rst
Proc Method : c:\tc data\data\06062016\alc b cal 06062016.mth
Cal Method : c:\tc data\data\06062016\alc b cal 06062016.mth



Channel A Chromatogram



Channel B Chromatogram

Peak #	Ret (min)	Compound	Area	Amount (g/100 ml)
3	1.601	ethanol	298739	0.5075
4	2.322	t-butanol	80666	0.9791
5	2.704	n-propanol	107624	1.0000

Peak #	Ret (min)	Compound	Area	Amount (g/100 ml)
4	1.494	ethanol	293454	0.5037
5	1.883	t-butanol	80252	0.9708
6	2.398	n-propanol	106014	1.0000

Sequence : C:\TC Data\Data\06092016\ALC batch 06092016.seq

Cerilliant JSO 6/10/16

Sample Name : 1:1 Dil. of ~~Gliniqa~~ 0.5 Lot

Instrument Name : Clarus 580 GC

Data Acquisition : Jun 09, 2016 at 02:39:13 PM

Report Date : Jun 10, 2016 at 07:09:40 AM

Cycle : 17

Sequence Name: : 06092016

Inst Method : c:\tc data\methods\alc gc method.mth

Report : C:\TC Data\Methods\ALCreport.tpm

Channel A:

Result File : C:\TC Data\Data\06092016\06092016A017.rst

Proc Method : c:\tc data\data\06062016\alc a cal 06062016.mth

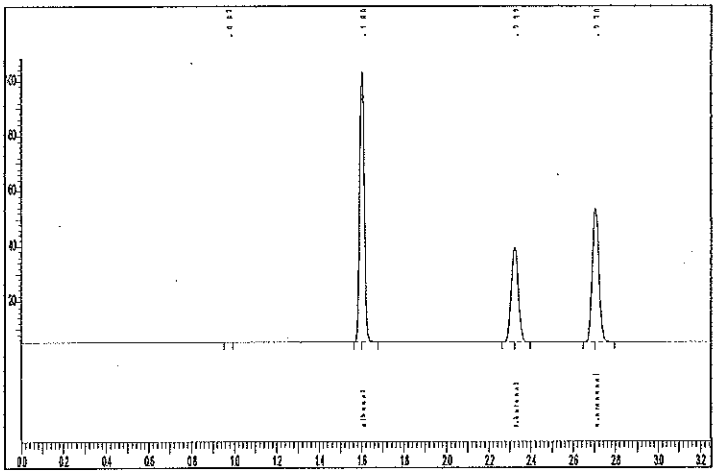
Cal Method : c:\tc data\data\06062016\alc a cal 06062016.mth

Channel B:

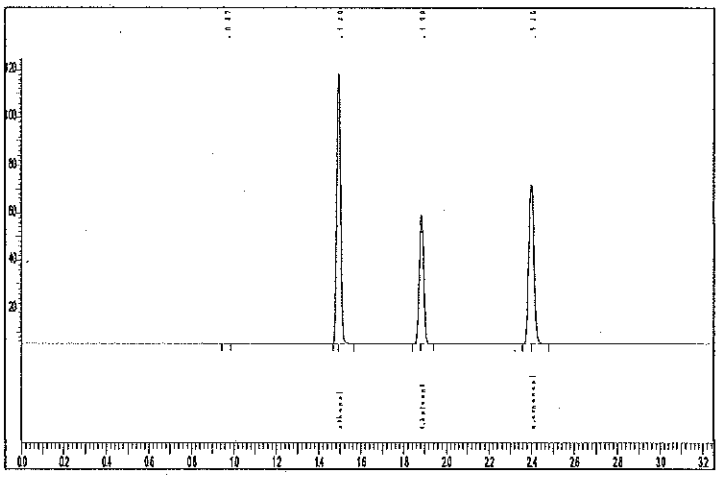
Result File : C:\TC Data\Data\06092016\06092016B017.rst

Proc Method : c:\tc data\data\06062016\alc b cal 06062016.mth

Cal Method : c:\tc data\data\06062016\alc b cal 06062016.mth



Channel A Chromatogram



Channel B Chromatogram

Peak #	Ret (min)	Compound	Area	Amount (g/100 ml)
2	1.601	ethanol	146066	0.2518
3	2.322	t-butanol	79405	0.9770
4	2.705	n-propanol	106163	1.0000

Peak #	Ret (min)	Compound	Area	Amount (g/100 ml)
2	1.493	ethanol	143506	0.2505
3	1.883	t-butanol	79417	0.9759
4	2.399	n-propanol	104362	1.0000

Sequence : C:\TC Data\Data\06092016\ALC batch 06092016.seq

Cerilliant JSD 6/10/16

Sample Name : 1:1 Dil. of ~~Clinica~~ 0.5 Lot

Instrument Name : Clarus 580 GC

Data Acquisition : Jun 09, 2016 at 02:49:13 PM

Report Date : Jun 10, 2016 at 07:09:40 AM

Cycle : 18

Sequence Name: : 06092016

Inst Method : c:\tc data\methods\alc gc method.mth

Report : C:\TC Data\Methods\ALCreport.tpm

Channel A:

Result File : C:\TC Data\Data\06092016\06092016A018.rst

Proc Method : c:\tc data\data\06062016\alc a cal 06062016.mth

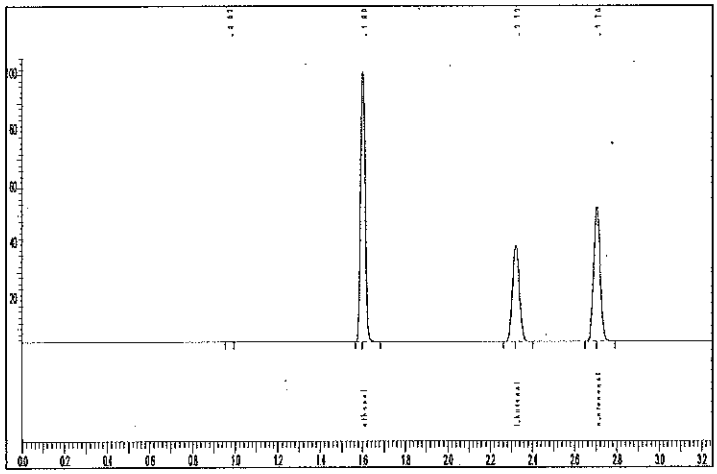
Cal Method : c:\tc data\data\06062016\alc a cal 06062016.mth

Channel B:

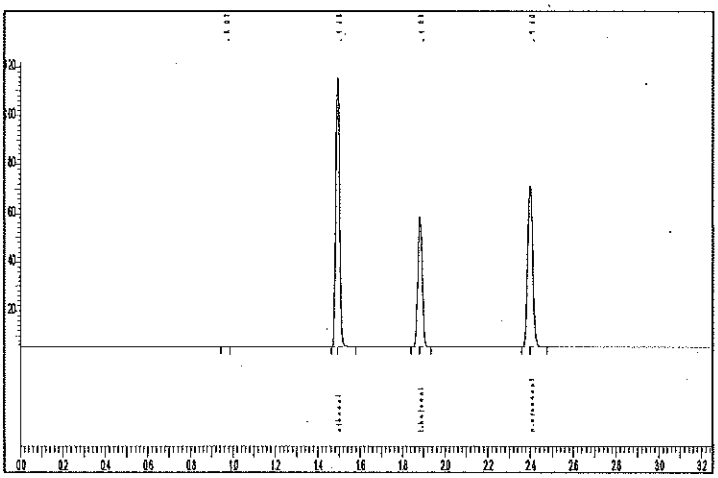
Result File : C:\TC Data\Data\06092016\06092016B018.rst

Proc Method : c:\tc data\data\06062016\alc b cal 06062016.mth

Cal Method : c:\tc data\data\06062016\alc b cal 06062016.mth



Channel A Chromatogram



Channel B Chromatogram

Peak #	Ret (min)	Compound	Area	Amount (g/100 ml)
2	1.601	ethanol	143657	0.2527
3	2.322	t-butanol	78947	0.9914
4	2.704	n-propanol	104024	1.0000

Peak #	Ret (min)	Compound	Area	Amount (g/100 ml)
2	1.493	ethanol	141261	0.2514
3	1.883	t-butanol	78641	0.9855
4	2.398	n-propanol	102341	1.0000

Sequence : C:\TC Data\Data\06092016\ALC batch 06092016.seq

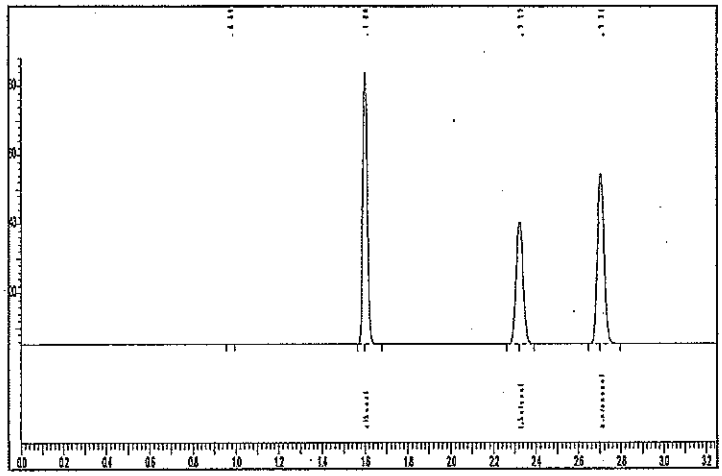
Sample Name : CCS 20
Data Acquisition : Jun 09, 2016 at 02:59:13 PM
Cycle : 19

Instrument Name : Clarus 580 GC
Report Date : Jun 10, 2016 at 07:09:40 AM
Sequence Name: : 06092016

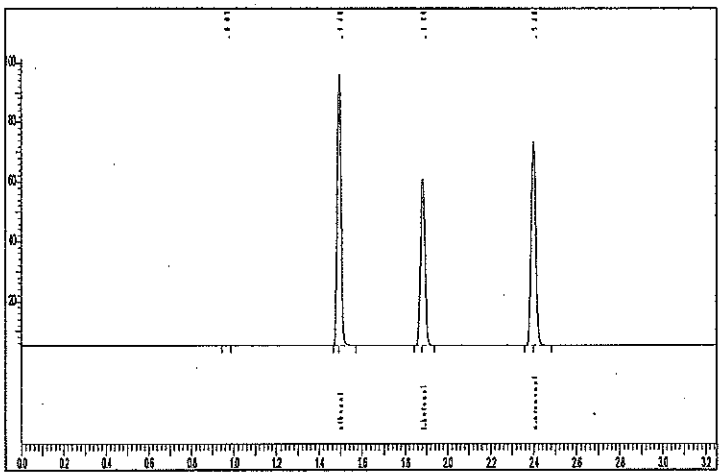
Inst Method : c:\tc data\methods\alc gc method.mth
Report : C:\TC Data\Methods\ALCreport.tpm

Channel A:
Result File : C:\TC Data\Data\06092016\06092016A019.rst
Proc Method : c:\tc data\data\06062016\alc a cal 06062016.mth
Cal Method : c:\tc data\data\06062016\alc a cal 06062016.mth

Channel B:
Result File : C:\TC Data\Data\06092016\06092016B019.rst
Proc Method : c:\tc data\data\06062016\alc b cal 06062016.mth
Cal Method : c:\tc data\data\06062016\alc b cal 06062016.mth



Channel A Chromatogram



Channel B Chromatogram

Peak #	Ret (min)	Compound	Area	Amount (g/100 ml)
2	1.602	ethanol	118093	0.2001
3	2.323	t-butanol	81889	0.9899
4	2.705	n-propanol	108057	1.0000

Peak #	Ret (min)	Compound	Area	Amount (g/100 ml)
2	1.494	ethanol	116378	0.1994
3	1.883	t-butanol	81979	0.9885
4	2.399	n-propanol	106362	1.0000

Sequence : C:\TC Data\Data\06092016\ALC batch 06092016.seq

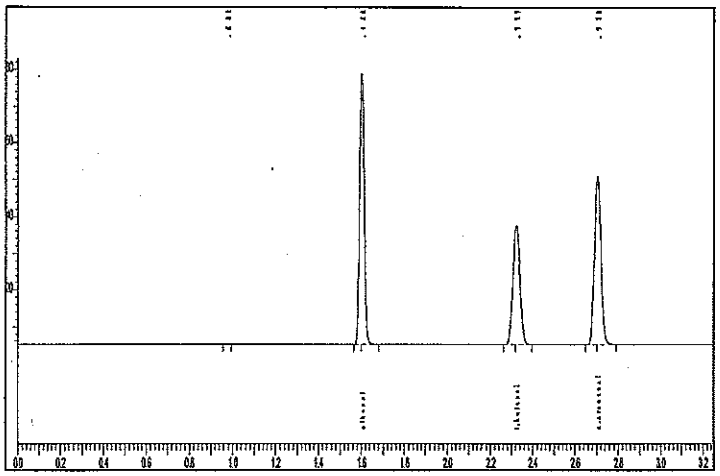
Sample Name : CCS 20
Data Acquisition : Jun 09, 2016 at 03:09:14 PM
Cycle : 20

Instrument Name : Clarus 580 GC
Report Date : Jun 10, 2016 at 07:09:40 AM
Sequence Name: : 06092016

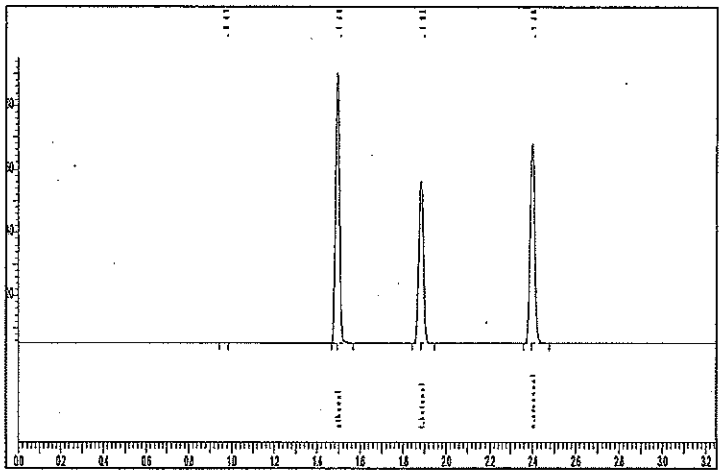
Inst Method : c:\tc data\methods\alc gc method.mth
Report : C:\TC Data\Methods\ALCreport.tpm

Channel A:
Result File : C:\TC Data\Data\06092016\06092016A020.rst
Proc Method : c:\tc data\data\06062016\alc a cal 06062016.mth
Cal Method : c:\tc data\data\06062016\alc a cal 06062016.mth

Channel B:
Result File : C:\TC Data\Data\06092016\06092016B020.rst
Proc Method : c:\tc data\data\06062016\alc b cal 06062016.mth
Cal Method : c:\tc data\data\06062016\alc b cal 06062016.mth



Channel A Chromatogram



Channel B Chromatogram

Peak #	Ret (min)	Compound	Area	Amount (g/100 ml)
2	1.601	ethanol	110494	0.2029
3	2.322	t-butanol	75209	0.9855
4	2.704	n-propanol	99692	1.0000

Peak #	Ret (min)	Compound	Area	Amount (g/100 ml)
2	1.493	ethanol	108717	0.2021
3	1.883	t-butanol	75259	0.9843
4	2.398	n-propanol	98051	1.0000

Sequence : C:\TC Data\Data\06092016\ALC batch 06092016.seq

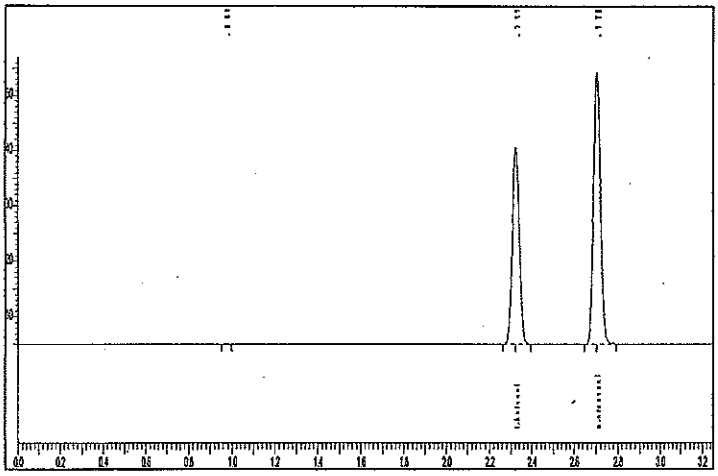
Sample Name : BLANK
Data Acquisition : Jun 09, 2016 at 03:19:14 PM
Cycle : 21

Instrument Name : Clarus 580 GC
Report Date : Jun 10, 2016 at 07:09:40 AM
Sequence Name: : 06092016

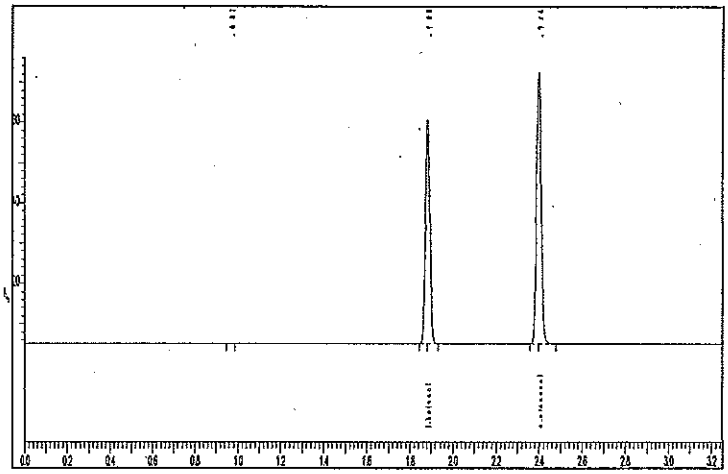
Inst Method : c:\tc data\methods\alc gc method.mth
Report : C:\TC Data\Methods\ALCreport.tpm

Channel A:
Result File : C:\TC Data\Data\06092016\06092016A021.rst
Proc Method : c:\tc data\data\06062016\alc a cal 06062016.mth
Cal Method : c:\tc data\data\06062016\alc a cal 06062016.mth

Channel B:
Result File : C:\TC Data\Data\06092016\06092016B021.rst
Proc Method : c:\tc data\data\06062016\alc b cal 06062016.mth
Cal Method : c:\tc data\data\06062016\alc b cal 06062016.mth



Channel A Chromatogram



Channel B Chromatogram

Peak #	Ret (min)	Compound	Area	Amount (g/100 ml)
2	2.322	t-butanol	82008	0.9988
3	2.704	n-propanol	107253	1.0000

Peak #	Ret (min)	Compound	Area	Amount (g/100 ml)
2	1.883	t-butanol	81719	0.9965
3	2.398	n-propanol	105172	1.0000

Standard	Manufacturer	Lot No.	Target	-10%	10%
WB Control	Cliniqa	1407031	0.078	0.070	0.086
AQ Control	Cerilliant	FN05211402	0.080	0.072	0.088
IS		IS-04132016			
TMX		TMX-08142015			
STD A	Cerilliant	FN080612-04	0.010	0.009	0.011
STD B	Cerilliant	FN08101401	0.020	0.018	0.022
STD C	Cerilliant	FN06231406	0.050	0.045	0.055
STD D	Cerilliant	FN09051304	0.080	0.072	0.088
STD E	Cerilliant	FN12011401	0.200	0.180	0.220
STD F	Cerilliant	FN11191402	0.400	0.360	0.440
STD G	Cerilliant	FN07031402	0.500	0.450	0.550
BLANK		BL-06062016			

FN07031402 150