

CERTIFICATE OF ANALYSIS

Alcohol Countermeasure Systems
Alcohol Reference Solution
Lot No: 201402A

Expiry Date: February 11, 2016

This solution was analyzed using the direct injection gas-chromatographic procedure coupled with the internal standard technique commensurate with forensic alcohol methodology.

A screening (pre-mix) analysis of the distilled water used in the preparation of this solution indicated that there were no volatile impurities present.

The target analytical concentration was 0.24 - 0.244 gram/dL (wt/vol) ethyl alcohol in aqueous solution with an equivalent vapour alcohol concentration of 0.198 - 0.202g/210L when used in a breath alcohol simulator heated to $34 \pm 0.2^\circ\text{C}$.

The solution was found to have an analytical concentration of 0.244 gram/dL (wt/vol) ethyl alcohol in aqueous solution with an equivalent vapour alcohol concentration of 0.200g/210L when used in a breath alcohol simulator heated to $34 \pm 0.2^\circ\text{C}$.

The solution is manufactured from distilled/de-ionized water and absolute ethyl alcohol (USP Grade). This lot contains 1,538 bottles (of 500 mL each) of Alcohol Reference Solution.

Date of Analysis: February 11, 2014


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TotalChrom Sequence File C:\Totalchrom Sequences\2013\Reference Solution Validation.seq

Printed by : manager on: 3/5/2014 10:51:06 AM
 Created by : manager on: 3/4/2014 2:08:55 PM
 Edited by : manager on: 3/4/2014 2:08:55 PM
 Number of Times Edited : 0

Description: ACS Alcohol Reference Solution Validation

Sequence File Header Information:

Number of Rows : 34
 Instrument Type : PE AutoSystem GC with built-in Autosampler
 Injection Type : SINGLE
 Raw tokens channel A :
 Result tokens channel A :
 Modified tokens channel A :
 Raw tokens channel B :
 Result tokens channel B :
 Modified tokens channel B :

Sequence Sample Descriptions - Channel A

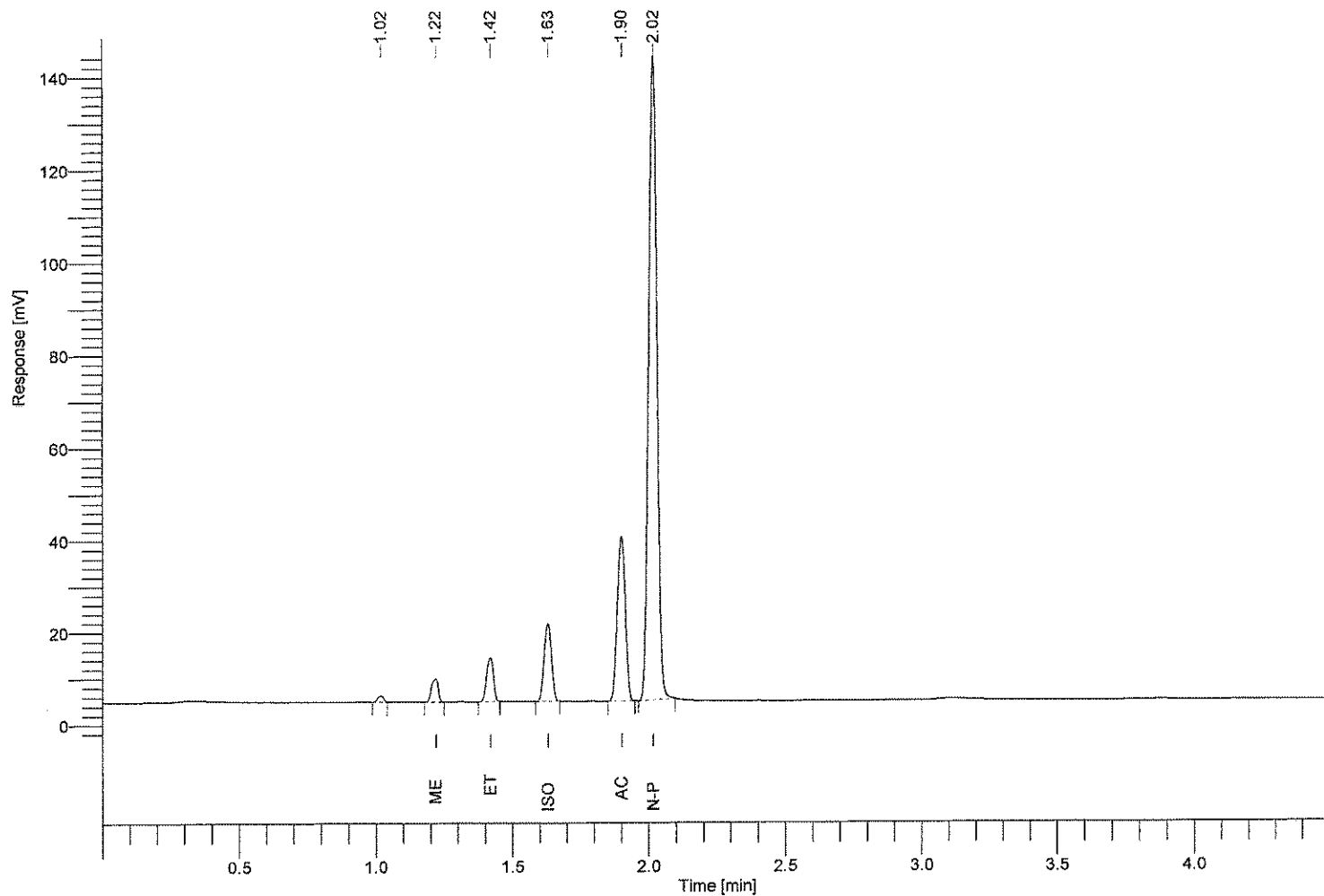
| Row | Type | Name | Number | Study name | Sample Amt | Int Std Amt | Sample Voi | Dil Factor | Multiplier | Divisor | Addend | Norm Factor |
|-----|--------------|--------------|-------------|------------|------------|-------------|------------|------------|------------|----------|----------|-------------|
| 1 | Cal:Replace | Volatile Mix | 041513DKR | | 1.000000 | 1.000000 | 1.000 | 1.000000 | 1.000000 | 1.000000 | 0.000000 | 100.000 |
| 2 | Blank | Blank | | | 1.000000 | 1.000000 | 1.000 | 1.000000 | 1.000000 | 1.000000 | 0.000000 | 100.000 |
| 3 | Cal:Replace | CER 025 | FN032210-01 | | 1.000000 | 1.000000 | 1.000 | 1.000000 | 1.000000 | 1.000000 | 0.000000 | 100.000 |
| 4 | Cal:Replace | CER 100 | FN050312-01 | | 1.000000 | 1.000000 | 1.000 | 1.000000 | 1.000000 | 1.000000 | 0.000000 | 100.000 |
| 5 | Cal:Replace | CER 200 | FN032712-01 | | 1.000000 | 1.000000 | 1.000 | 1.000000 | 1.000000 | 1.000000 | 0.000000 | 100.000 |
| 6 | Cal:Replace | CER 400 | FN012712-01 | | 1.000000 | 1.000000 | 1.000 | 1.000000 | 1.000000 | 1.000000 | 0.000000 | 100.000 |
| 7 | Ctrl Sample | RES 50 | A092903 | | 1.000000 | 1.000000 | 1.000 | 1.000000 | 1.000000 | 1.000000 | 0.000000 | 100.000 |
| 8 | Sample | 200 | 1206 | | 1.000000 | 1.000000 | 1.000 | 1.000000 | 1.000000 | 1.000000 | 0.000000 | 100.000 |
| 9 | Sample | 200 | 1200 | | 1.000000 | 1.000000 | 1.000 | 1.000000 | 1.000000 | 1.000000 | 0.000000 | 100.000 |
| 10 | Sample | 200 | 1201 | | 1.000000 | 1.000000 | 1.000 | 1.000000 | 1.000000 | 1.000000 | 0.000000 | 100.000 |
| 11 | Sample | 200 | 1205 | | 1.000000 | 1.000000 | 1.000 | 1.000000 | 1.000000 | 1.000000 | 0.000000 | 100.000 |
| 12 | Sample | 200 | 1172 | | 1.000000 | 1.000000 | 1.000 | 1.000000 | 1.000000 | 1.000000 | 0.000000 | 100.000 |
| 13 | Sample | 200 | 1207 | | 1.000000 | 1.000000 | 1.000 | 1.000000 | 1.000000 | 1.000000 | 0.000000 | 100.000 |
| 14 | Sample | 200 | 1202 | | 1.000000 | 1.000000 | 1.000 | 1.000000 | 1.000000 | 1.000000 | 0.000000 | 100.000 |
| 15 | Sample | 200 | 1203 | | 1.000000 | 1.000000 | 1.000 | 1.000000 | 1.000000 | 1.000000 | 0.000000 | 100.000 |
| 16 | Sample | 200 | 1197 | | 1.000000 | 1.000000 | 1.000 | 1.000000 | 1.000000 | 1.000000 | 0.000000 | 100.000 |
| 17 | Sample | 200 | 1198 | | 1.000000 | 1.000000 | 1.000 | 1.000000 | 1.000000 | 1.000000 | 0.000000 | 100.000 |
| 18 | Ctrl Sample | RES 100 | A092464 | | 1.000000 | 1.000000 | 1.000 | 1.000000 | 1.000000 | 1.000000 | 0.000000 | 100.000 |
| 19 | Sample | 200 | 1206 | | 1.000000 | 1.000000 | 1.000 | 1.000000 | 1.000000 | 1.000000 | 0.000000 | 100.000 |
| 20 | Sample | 200 | 1200 | | 1.000000 | 1.000000 | 1.000 | 1.000000 | 1.000000 | 1.000000 | 0.000000 | 100.000 |
| 21 | Sample | 200 | 1201 | | 1.000000 | 1.000000 | 1.000 | 1.000000 | 1.000000 | 1.000000 | 0.000000 | 100.000 |
| 22 | Sample | 200 | 1205 | | 1.000000 | 1.000000 | 1.000 | 1.000000 | 1.000000 | 1.000000 | 0.000000 | 100.000 |
| 23 | Sample | 200 | 1172 | | 1.000000 | 1.000000 | 1.000 | 1.000000 | 1.000000 | 1.000000 | 0.000000 | 100.000 |
| 24 | Sample | 200 | 1207 | | 1.000000 | 1.000000 | 1.000 | 1.000000 | 1.000000 | 1.000000 | 0.000000 | 100.000 |
| 25 | Sample | 200 | 1202 | | 1.000000 | 1.000000 | 1.000 | 1.000000 | 1.000000 | 1.000000 | 0.000000 | 100.000 |
| 26 | Sample | 200 | 1203 | | 1.000000 | 1.000000 | 1.000 | 1.000000 | 1.000000 | 1.000000 | 0.000000 | 100.000 |
| 27 | Sample | 200 | 1197 | | 1.000000 | 1.000000 | 1.000 | 1.000000 | 1.000000 | 1.000000 | 0.000000 | 100.000 |
| 28 | Sample | 200 | 1198 | | 1.000000 | 1.000000 | 1.000 | 1.000000 | 1.000000 | 1.000000 | 0.000000 | 100.000 |
| 29 | Ctrl Sample | RES 300 | A094444 | | 1.000000 | 1.000000 | 1.000 | 1.000000 | 1.000000 | 1.000000 | 0.000000 | 100.000 |
| 30 | Sample | RepCo 40 | 044 | | 1.000000 | 1.000000 | 1.000 | 1.000000 | 1.000000 | 1.000000 | 0.000000 | 100.000 |
| 31 | Sample | RepCo 100 | 1509 | | 1.000000 | 1.000000 | 1.000 | 1.000000 | 1.000000 | 1.000000 | 0.000000 | 100.000 |
| 32 | Sample | RepCo 200 | 0018 | | 1.000000 | 1.000000 | 1.000 | 1.000000 | 1.000000 | 1.000000 | 0.000000 | 100.000 |
| 33 | Sample | RepCo 400 | | | 1.000000 | 1.000000 | 1.000 | 1.000000 | 1.000000 | 1.000000 | 0.000000 | 100.000 |
| 34 | Cinup-Shutdn | | | | | | | | | | | |

BHK

Software Version : 6.3.2.0646
 Reprocess Number : gc-pc: 601
 Sample Name : Volatile Mix
 Instrument Name : ClarusGC
 Rack/Vial : 0/0
 Sample Amount : 1.000000
 Cycle : 1

Date : 3/5/2014 12:19:54 PM
 Data Acquisition Time : 3/5/2014 12:15:12 PM
 Channel : A
 Operator : manager
 Dilution Factor : 1.000000

Result File : c:\totalchrom data\03052014\vol mix.rst
 Sequence File : C:\Totalchrom Sequences\2013\ACS validation03052014bhk.seq



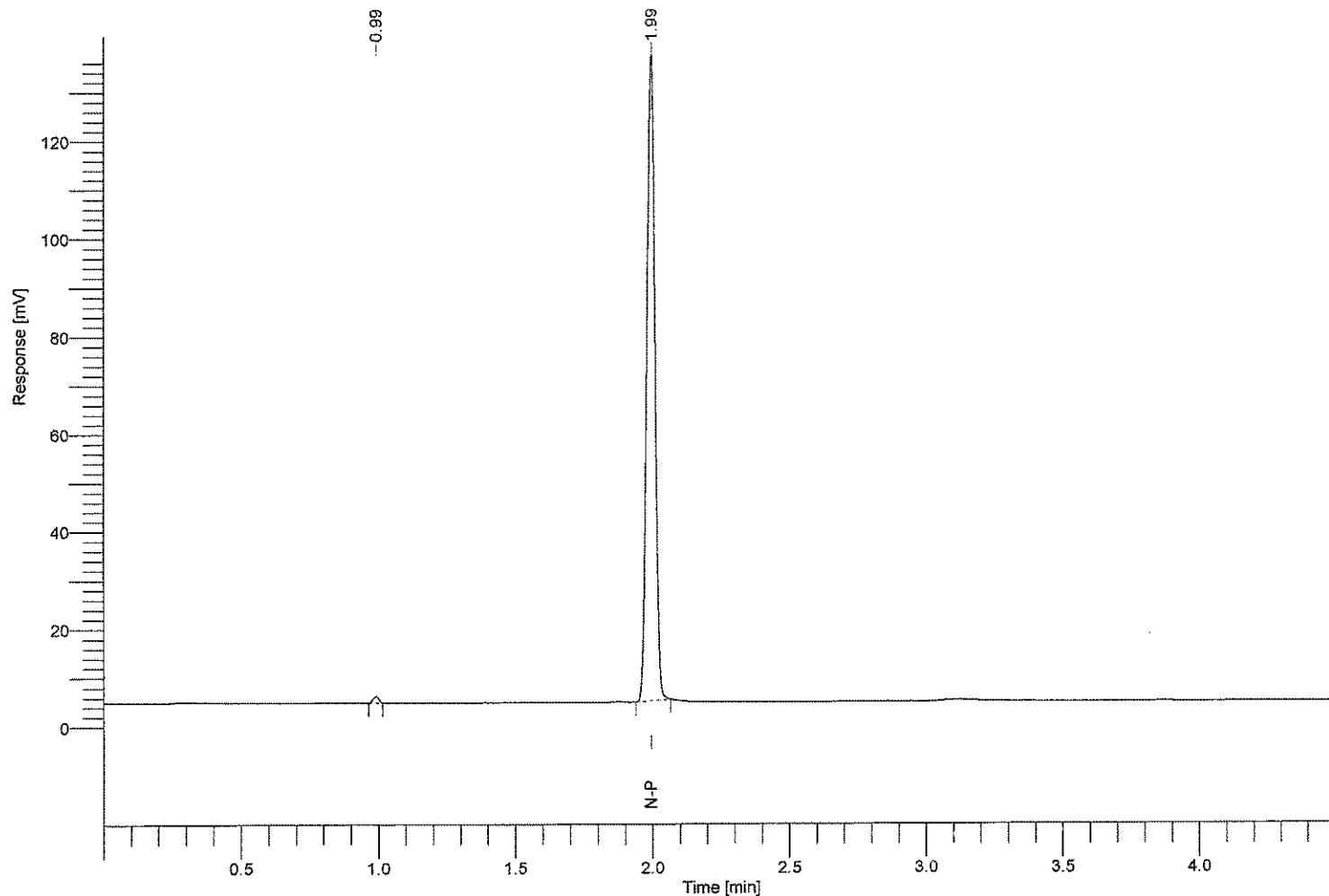
| Component Name | Time [min] | RRt | Area [uV*sec] | Conc. g/100ml |
|----------------|------------|-------|---------------|---------------|
| methanol | 1.217 | 0.604 | 8518.49 | 0.040 |
| ethanol | 1.418 | 0.703 | 16642.78 | 0.039 |
| isopropanol | 1.630 | 0.809 | 32129.41 | 0.040 |
| acetone | 1.901 | 0.943 | 72199.30 | 0.040 |
| n-propanol | 2.016 | 1.000 | 294717.54 | ----- |

BK

Software Version : 6.3.2.0646
Reprocess Number : gc-pc: 602
Sample Name : Blank
Instrument Name : ClarusGC
Rack/Vial : 0/0
Sample Amount : 1.000000
Cycle : 2

Date : 3/5/2014 12:24:52 PM
Data Acquisition Time : 3/5/2014 12:20:11 PM
Channel : A
Operator : manager
Dilution Factor : 1.000000

Result File : c:\totalchrom data\03052014\blank.rst
Sequence File : C:\Totalchrom Sequences\2013\ACS validation\03052014\bhk.seq



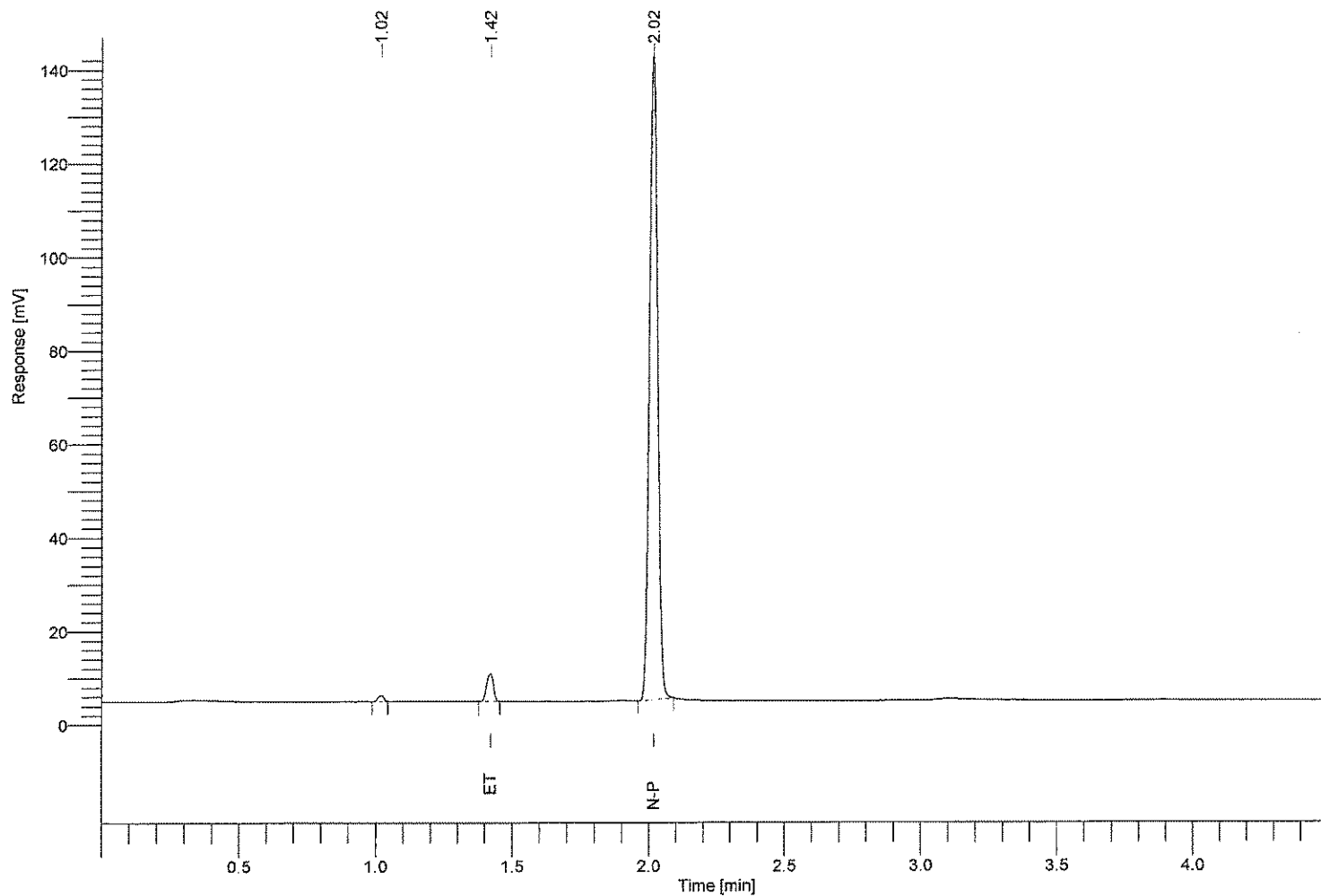
| Component Name | Time [min] | RRt | Area [uV*sec] | Conc. g/100ml |
|----------------|------------|-------|---------------|---------------|
| methanol | 1.220 | ---- | 0.00 | 0.000 |
| ethanol | 1.420 | ---- | 0.00 | 0.000 |
| isopropanol | 1.640 | ---- | 0.00 | 0.000 |
| acetone | 1.910 | ---- | 0.00 | 0.000 |
| n-propanol | 1.994 | 1.000 | 273874.70 | ----- |

BK

Software Version : 6.3.2.0646
 Reprocess Number : gc-pc: 603
 Sample Name : CER 025
 Instrument Name : ClarusGC
 Rack/Vial : 0/0
 Sample Amount : 1.000000
 Cycle : 3

Date : 3/5/2014 12:29:52 PM
 Data Acquisition Time : 3/5/2014 12:25:11 PM
 Channel : A
 Operator : manager
 Dilution Factor : 1.000000

Result File : c:\totalchrom data\03052014\cer25.rst
 Sequence File : C:\Totalchrom Sequences\2013\ACS validation\03052014bhk.seq



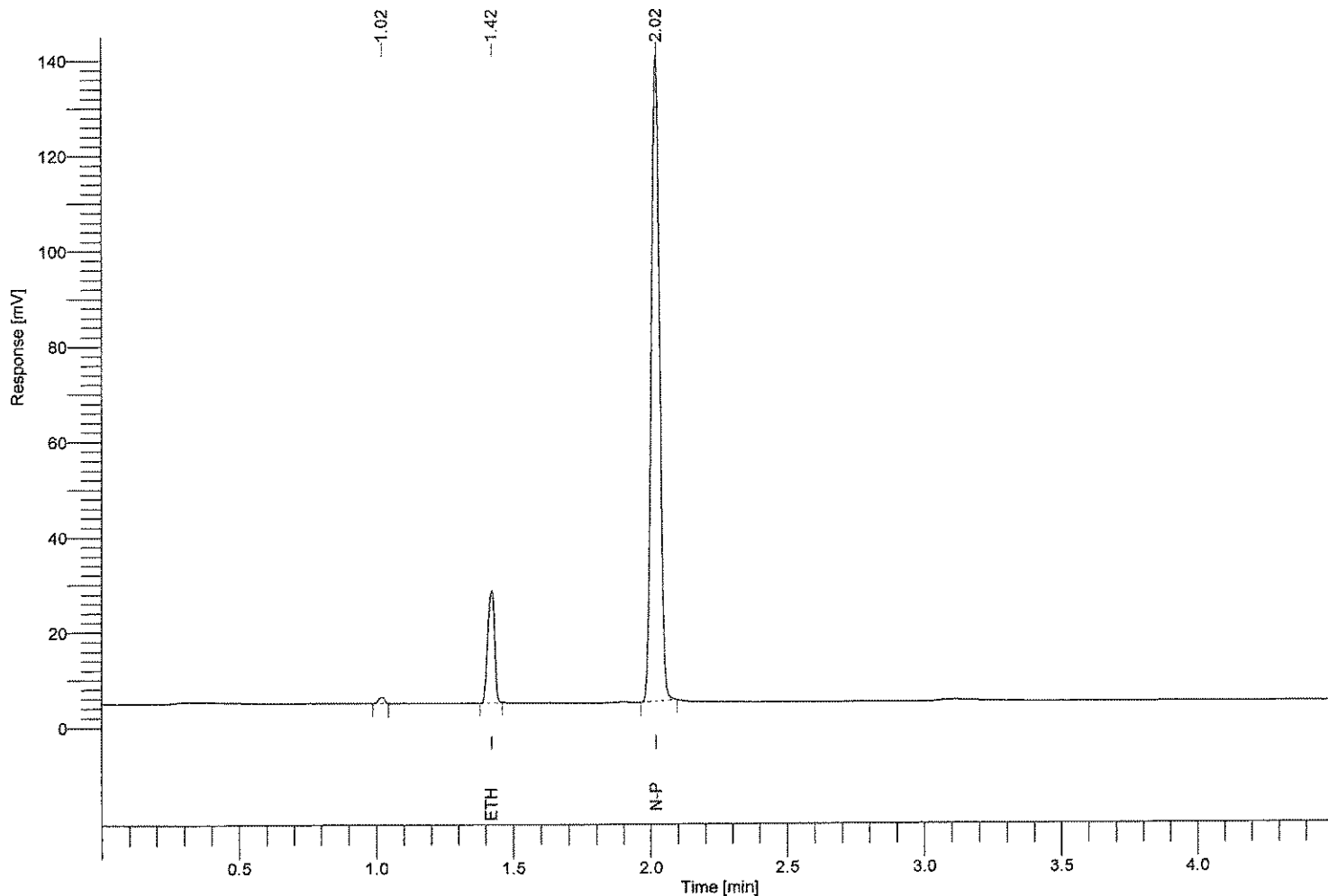
| Component Name | Time [min] | RRt | Area [uV*sec] | Conc. g/100ml |
|----------------|------------|-------|---------------|---------------|
| methanol | 1.220 | ----- | 0.00 | 0.000 |
| ethanol | 1.419 | 0.703 | 10286.52 | 0.025 |
| isopropanol | 1.640 | ----- | 0.00 | 0.000 |
| acetone | 1.910 | ----- | 0.00 | 0.000 |
| n-propanol | 2.017 | 1.000 | 290670.03 | ----- |

BK

Software Version : 6.3.2.0646
 Reprocess Number : gc-pc: 604
 Sample Name : CER 100
 Instrument Name : ClarusGC
 Rack/Vial : 0/0
 Sample Amount : 1.000000
 Cycle : 4

Date : 3/5/2014 12:34:53 PM
 Data Acquisition Time : 3/5/2014 12:30:11 PM
 Channel : A
 Operator : manager
 Dilution Factor : 1.000000

Result File : c:\totalchrom data\03052014\cer100.rst
 Sequence File : C:\Totalchrom Sequences\2013\ACS validation03052014bhk.seq



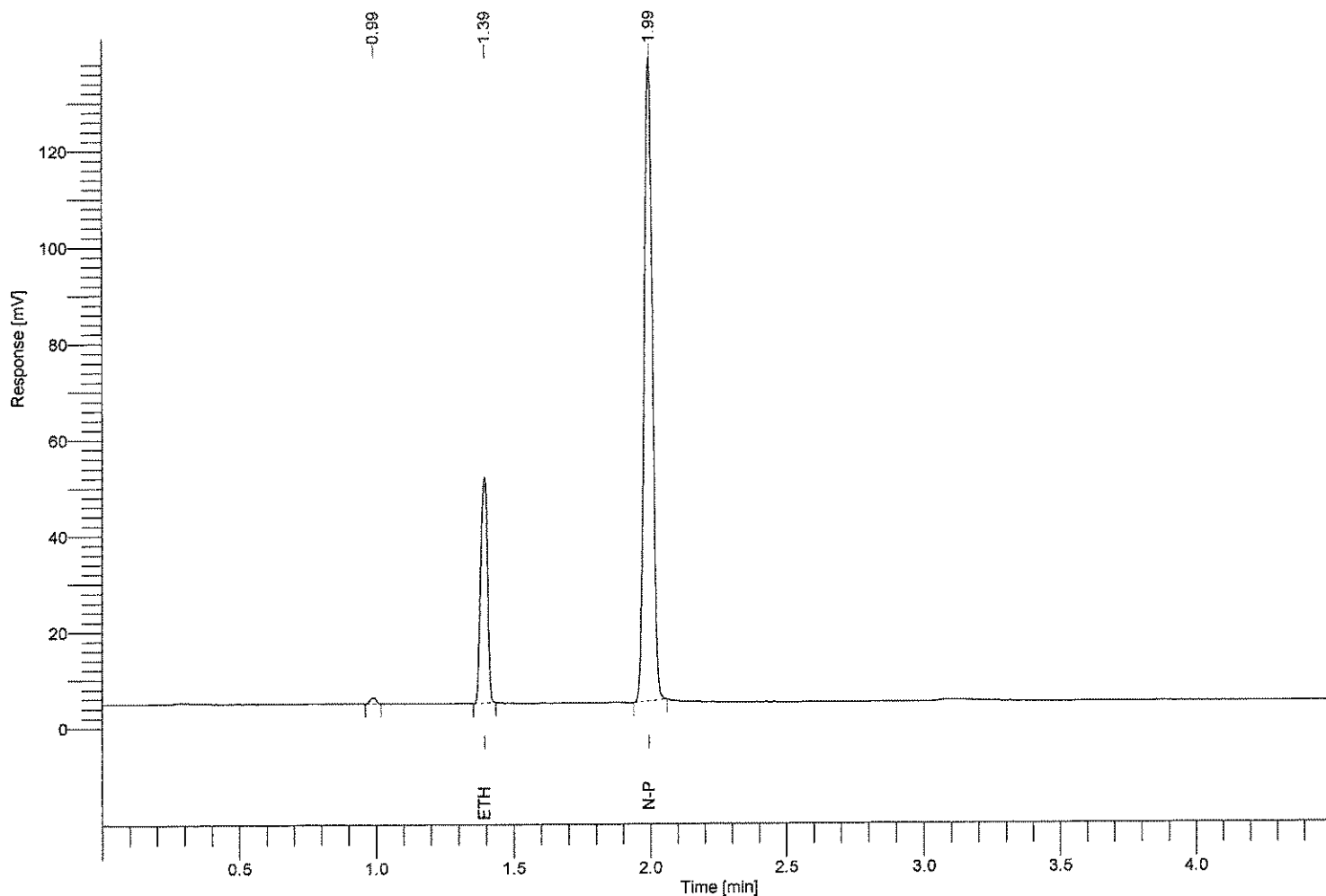
| Component Name | Time [min] | RRt | Area [uV*sec] | Conc. g/100ml |
|----------------|------------|-------|---------------|---------------|
| methanol | 1.220 | ----- | 0.00 | 0.000 |
| ethanol | 1.419 | 0.703 | 41091.42 | 0.099 |
| isopropanol | 1.640 | ----- | 0.00 | 0.000 |
| acetone | 1.910 | ----- | 0.00 | 0.000 |
| n-propanol | 2.018 | 1.000 | 286020.78 | ----- |

ABK

Software Version : 6.3.2.0646
Reprocess Number : gc-pc: 605
Sample Name : CER 200
Instrument Name : ClarusGC
Rack/Vial : 0/0
Sample Amount : 1.000000
Cycle : 5

Date : 3/5/2014 12:39:53 PM
Data Acquisition Time : 3/5/2014 12:35:11 PM
Channel : A
Operator : manager
Dilution Factor : 1.000000

Result File : c:\totalchrom data\03052014\cer200.rst
Sequence File : C:\Totalchrom Sequences\2013\ACS validation03052014bhk.seq



| Component Name | Time [min] | RRt | Area [uV*sec] | Conc. g/100ml |
|----------------|------------|-------|---------------|---------------|
| methanol | 1.220 | ----- | 0.00 | 0.000 |
| ethanol | 1.393 | 0.699 | 81319.20 | 0.197 |
| isopropanol | 1.640 | ----- | 0.00 | 0.000 |
| acetone | 1.910 | ----- | 0.00 | 0.000 |
| n-propanol | 1.994 | 1.000 | 282343.57 | ----- |

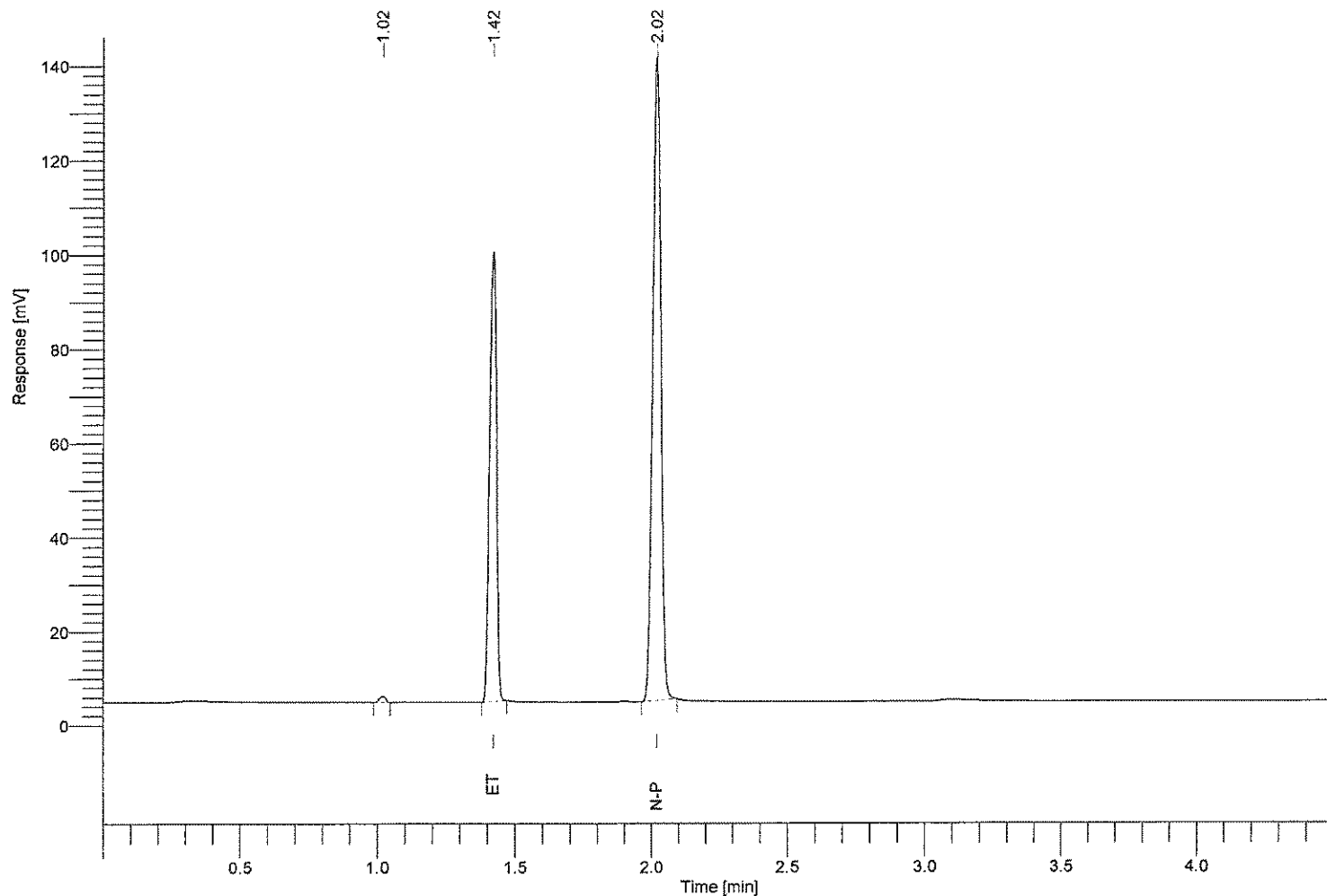
15K

Software Version : 6.3.2.0646
 Reprocess Number : gc-pc: 606
 Sample Name : CER 400
 Instrument Name : ClarusGC
 Rack/Vial : 0/0
 Sample Amount : 1.000000
 Cycle : 6

Date : 3/5/2014 12:44:53 PM
 Data Acquisition Time : 3/5/2014 12:40:11 PM
 Channel : A
 Operator : manager
 Dilution Factor : 1.000000

Result File : c:\totalchrom data\03052014\cer400.rst

Sequence File : C:\Totalchrom Sequences\2013\ACS validation\03052014bhk.seq



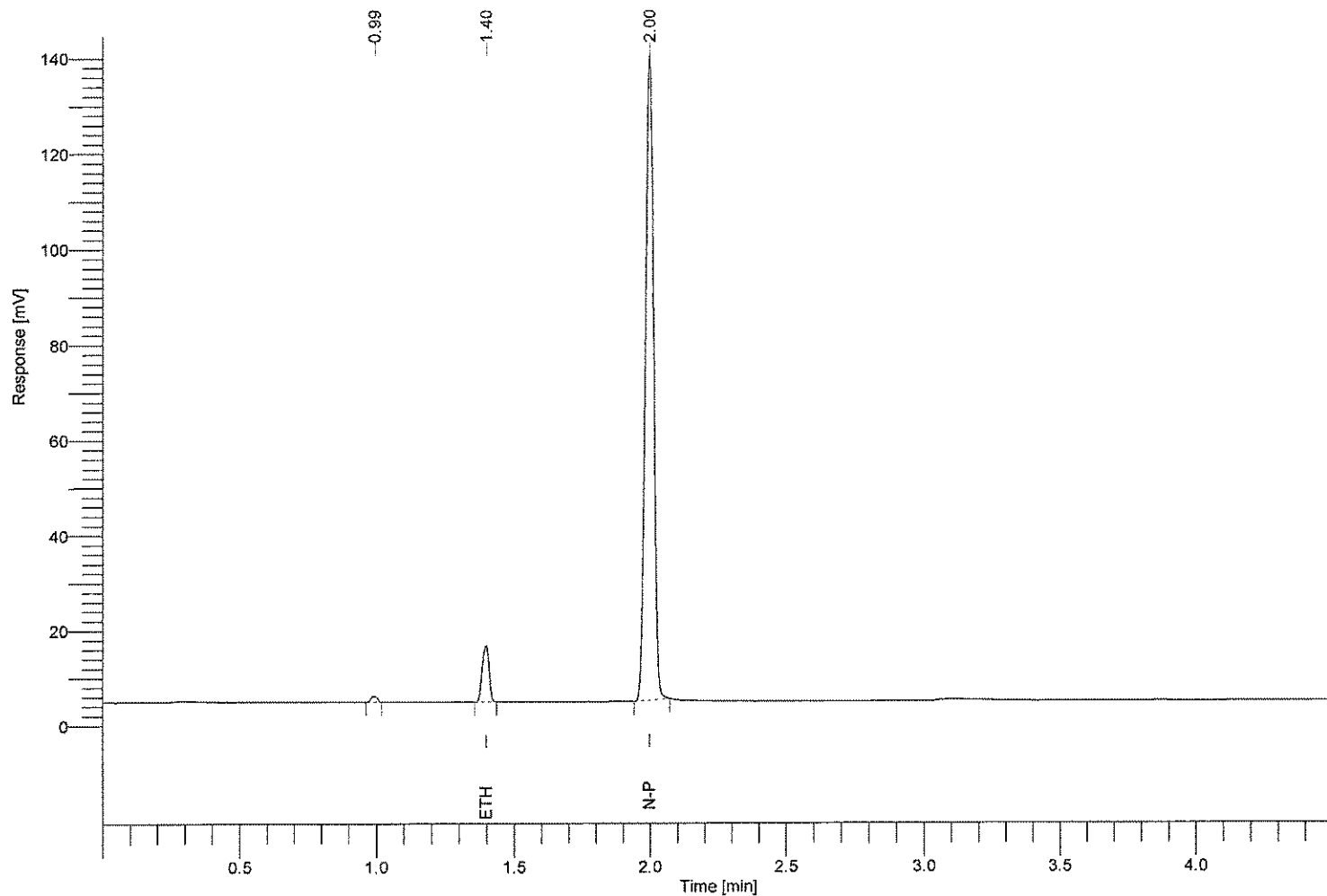
| Component Name | Time [min] | RRt | Area [uV*sec] | Conc. g/100ml |
|----------------|------------|-------|---------------|---------------|
| methanol | 1.220 | ----- | 0.00 | 0.000 |
| ethanol | 1.420 | 0.703 | 167104.45 | 0.400 |
| isopropanol | 1.640 | ----- | 0.00 | 0.000 |
| acetone | 1.910 | ----- | 0.00 | 0.000 |
| n-propanol | 2.018 | 1.000 | 288954.25 | ----- |

BK

Software Version : 6.3.2.0646
 Reprocess Number : gc-pc: 607
 Sample Name : RES 50
 Instrument Name : ClarusGC
 Rack/Vial : 0/0
 Sample Amount : 1.000000
 Cycle : 7

Date : 3/5/2014 12:49:53 PM
 Data Acquisition Time : 3/5/2014 12:45:11 PM
 Channel : A
 Operator : manager
 Dilution Factor : 1.000000

Result File : c:\totalchrom data\03052014\res50.rst
 Sequence File : C:\Totalchrom Sequences\2013\ACS validation03052014bhk.seq



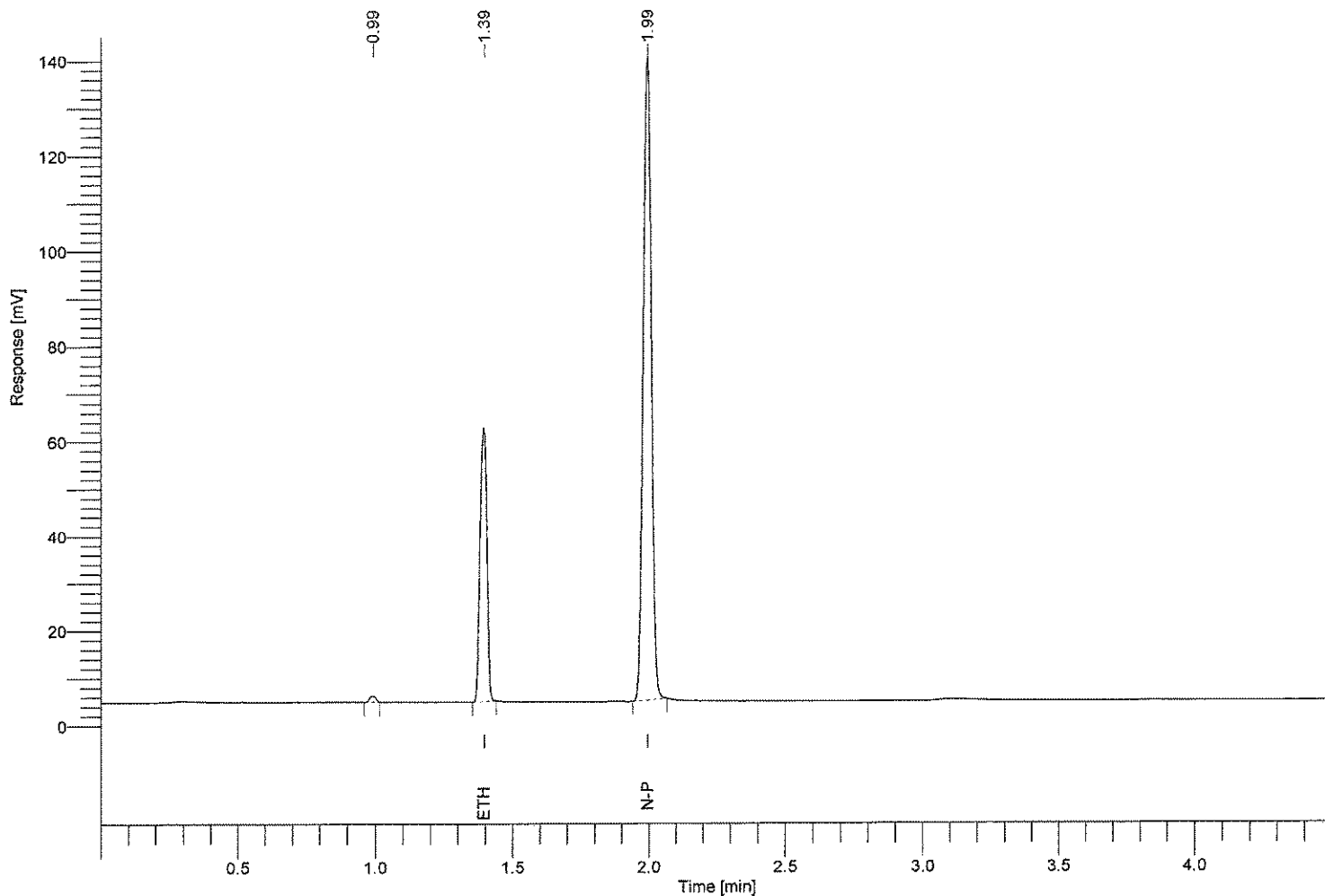
| Component Name | Time [min] | RRt | Area [uV*sec] | Conc. g/100ml |
|----------------|------------|-------|---------------|---------------|
| methanol | 1.220 | ---- | 0.00 | 0.000 |
| ethanol | 1.396 | 0.699 | 20289.00 | 0.050 |
| isopropanol | 1.640 | ---- | 0.00 | 0.000 |
| acetone | 1.910 | ---- | 0.00 | 0.000 |
| n-propanol | 1.997 | 1.000 | 284399.34 | ----- |

bk

Software Version : 6.3.2.0646
 Reprocess Number : gc-pc: 608
 Sample Name : 200
 Instrument Name : ClarusGC
 Rack/Vial : 0/0
 Sample Amount : 1.000000
 Cycle : 8

Date : 3/5/2014 12:54:53 PM
 Data Acquisition Time : 3/5/2014 12:50:11 PM
 Channel : A
 Operator : manager
 Dilution Factor : 1.000000

Result File : c:\totalchrom data\03052014\1206.rst
 Sequence File : C:\Totalchrom Sequences\2013\ACS validation\03052014bhk.seq



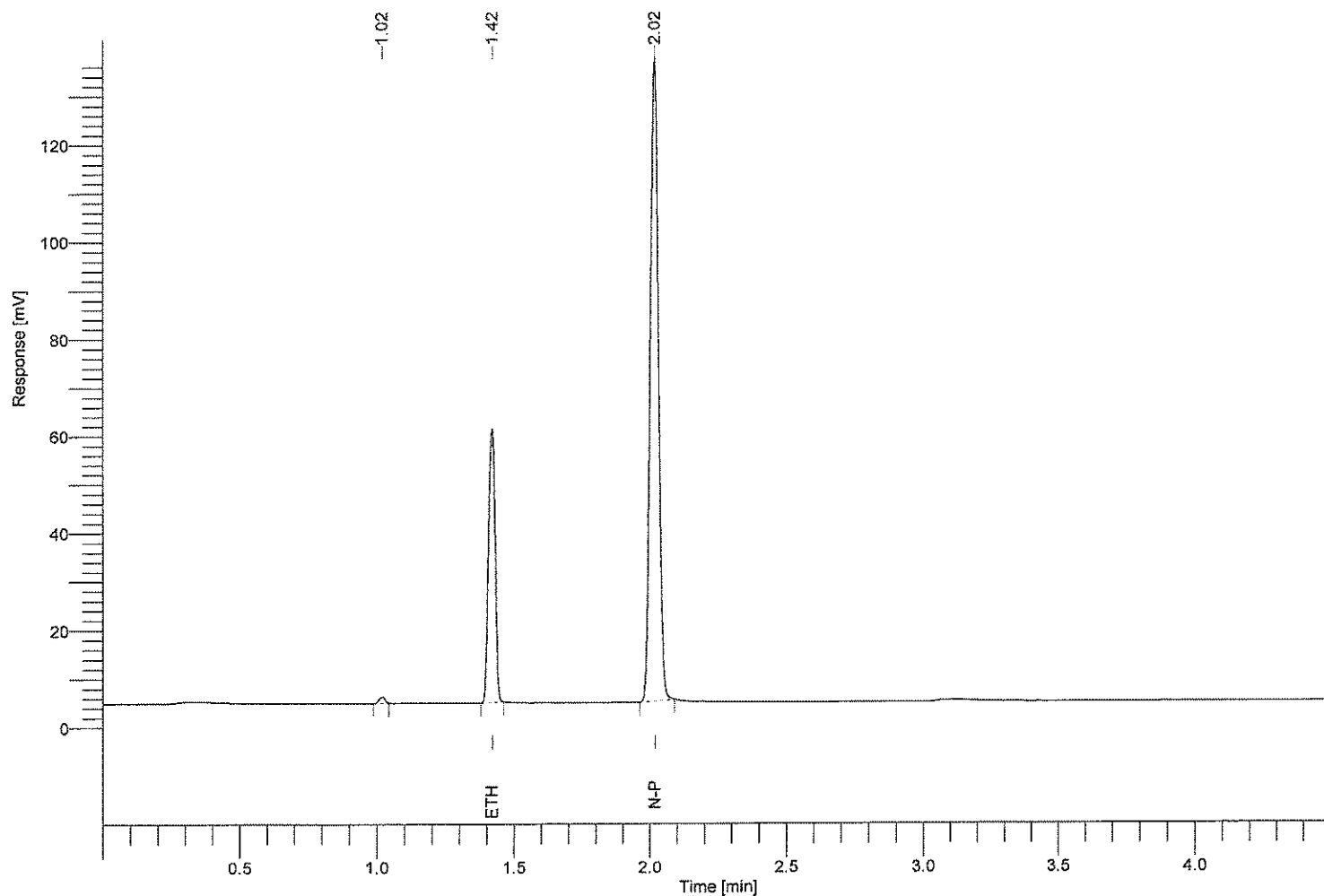
| Component Name | Time [min] | RRt | Area [uV*sec] | Conc. g/100ml |
|----------------|------------|-------|---------------|---------------|
| methanol | 1.220 | ----- | 0.00 | 0.000 |
| ethanol | 1.394 | 0.699 | 100037.72 | 0.243 |
| isopropanol | 1.640 | ----- | 0.00 | 0.000 |
| acetone | 1.910 | ----- | 0.00 | 0.000 |
| n-propanol | 1.995 | 1.000 | 285096.63 | ----- |

BK

Software Version : 6.3.2.0646
 Reprocess Number : gc-pc: 609
 Sample Name : 200
 Instrument Name : ClarusGC
 Rack/Vial : 0/0
 Sample Amount : 1.000000
 Cycle : 9

Date : 3/5/2014 12:59:53 PM
 Data Acquisition Time : 3/5/2014 12:55:11 PM
 Channel : A
 Operator : manager
 Dilution Factor : 1.000000

Result File : c:\totalchrom data\03052014\1200.rst
 Sequence File : C:\Totalchrom Sequences\2013\ACS validation\03052014bhk.seq

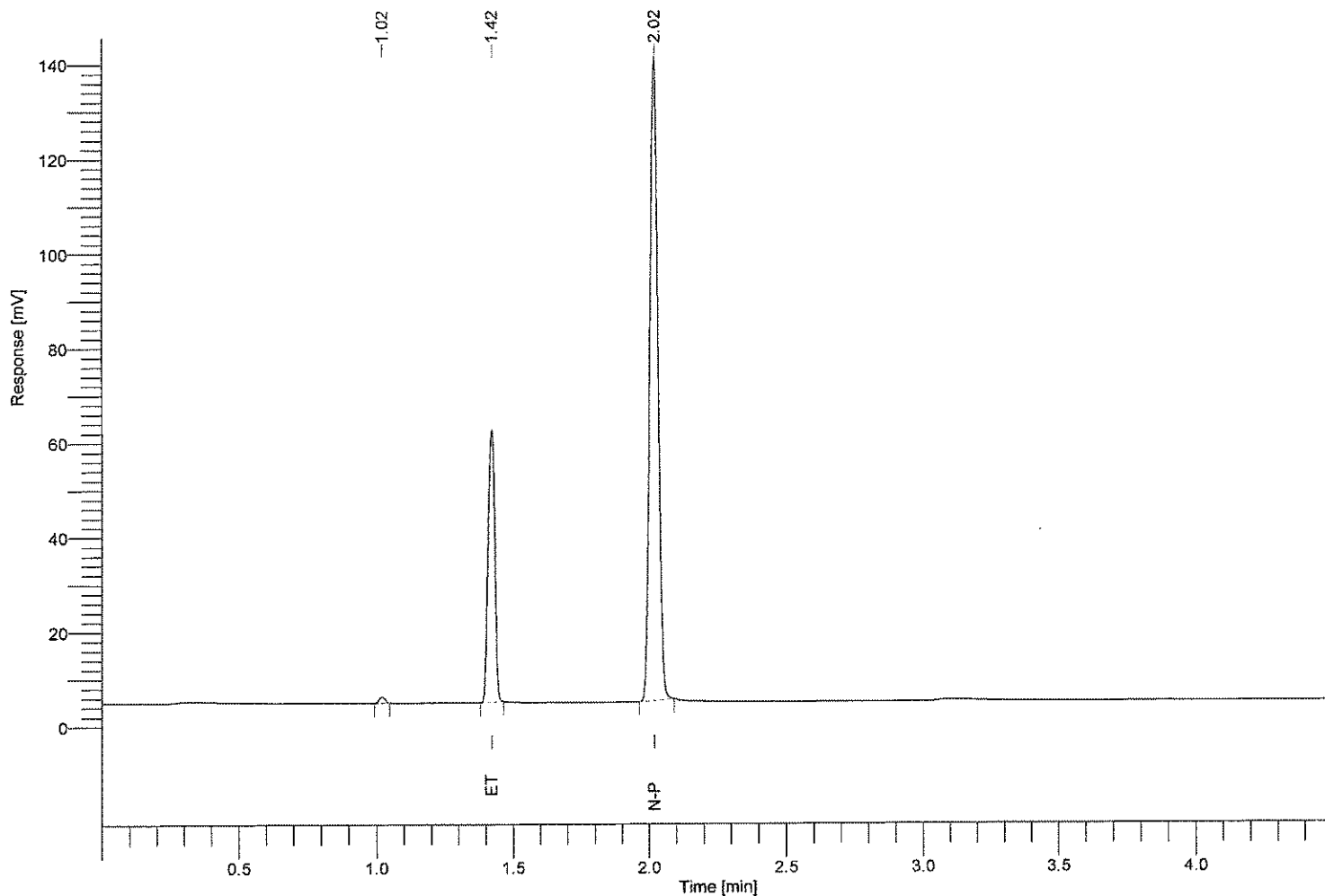


| Component Name | Time [min] | RRt | Area [uV*sec] | Conc. g/100ml |
|----------------|------------|-------|---------------|---------------|
| methanol | 1.220 | ---- | 0.00 | 0.000 |
| ethanol | 1.420 | 0.703 | 96671.65 | 0.242 |
| isopropanol | 1.640 | ---- | 0.00 | 0.000 |
| acetone | 1.910 | ---- | 0.00 | 0.000 |
| n-propanol | 2.018 | 1.000 | 276790.85 | ----- BK |

Software Version : 6.3.2.0646
 Reprocess Number : gc-pc: 610
 Sample Name : 200
 Instrument Name : ClarusGC
 Rack/Vial : 0/0
 Sample Amount : 1.000000
 Cycle : 10

Date : 3/5/2014 1:04:52 PM
 Data Acquisition Time : 3/5/2014 1:00:11 PM
 Channel : A
 Operator : manager
 Dilution Factor : 1.000000

Result File : c:\totalchrom data\03052014\1201.rst
 Sequence File : C:\Totalchrom Sequences\2013\ACS validation\03052014bhk.seq



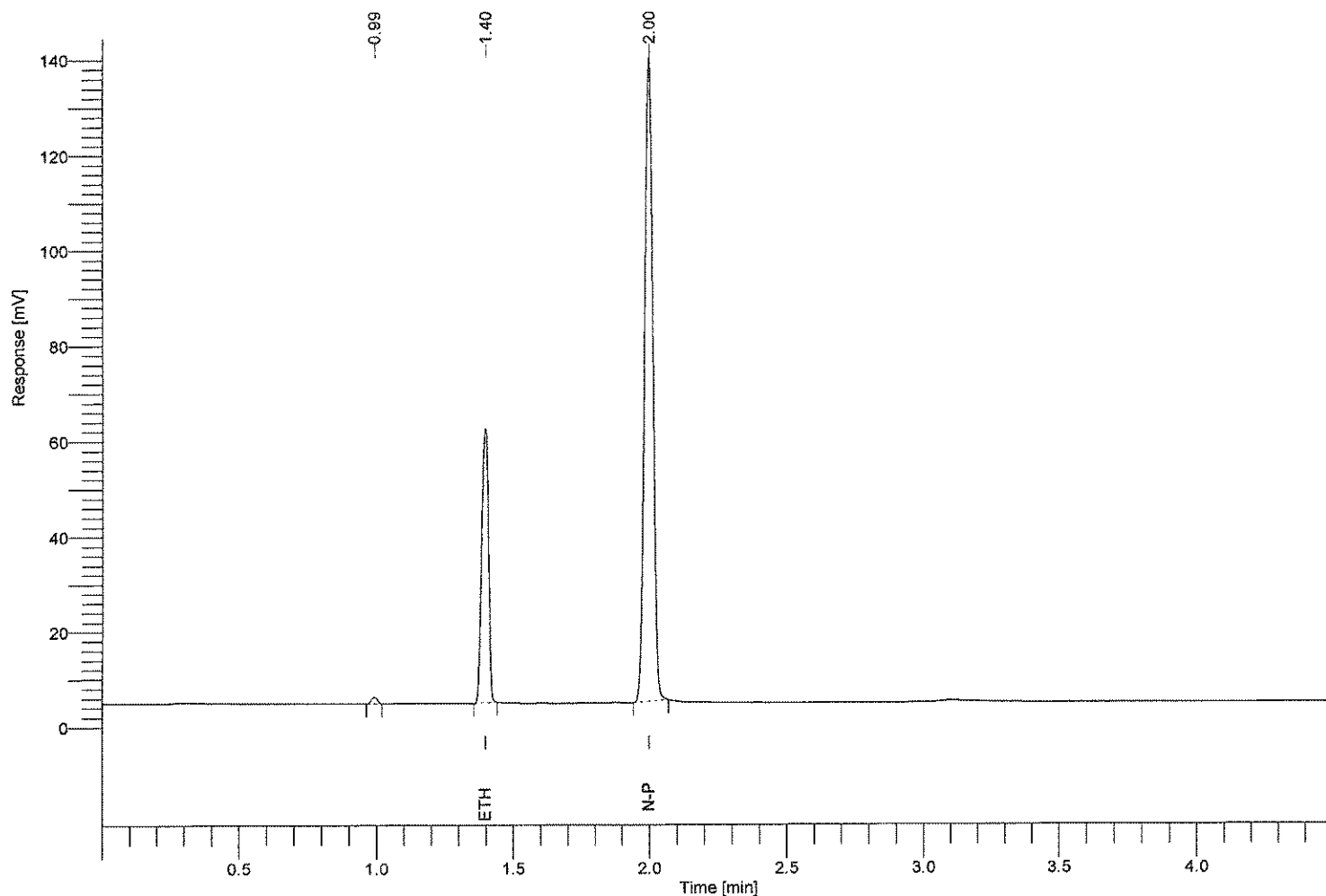
| Component Name | Time [min] | RRt | Area [uV*sec] | Conc. g/100ml |
|----------------|------------|-------|---------------|---------------|
| methanol | 1.220 | ----- | 0.00 | 0.000 |
| ethanol | 1.420 | 0.703 | 99523.37 | 0.242 |
| isopropanol | 1.640 | ----- | 0.00 | 0.000 |
| acetone | 1.910 | ----- | 0.00 | 0.000 |
| n-propanol | 2.019 | 1.000 | 285318.94 | ----- |

ASK

Software Version : 6.3.2.0646
 Reprocess Number : gc-pc: 611
 Sample Name : 200
 Instrument Name : ClarusGC
 Rack/Vial : 0/0
 Sample Amount : 1.000000
 Cycle : 11

Date : 3/5/2014 1:09:53 PM
 Data Acquisition Time : 3/5/2014 1:05:11 PM
 Channel : A
 Operator : manager
 Dilution Factor : 1.000000

Result File : c:\totalchrom data\03052014\1205.rst
 Sequence File : C:\Totalchrom Sequences\2013\ACS validation\03052014bhk.seq

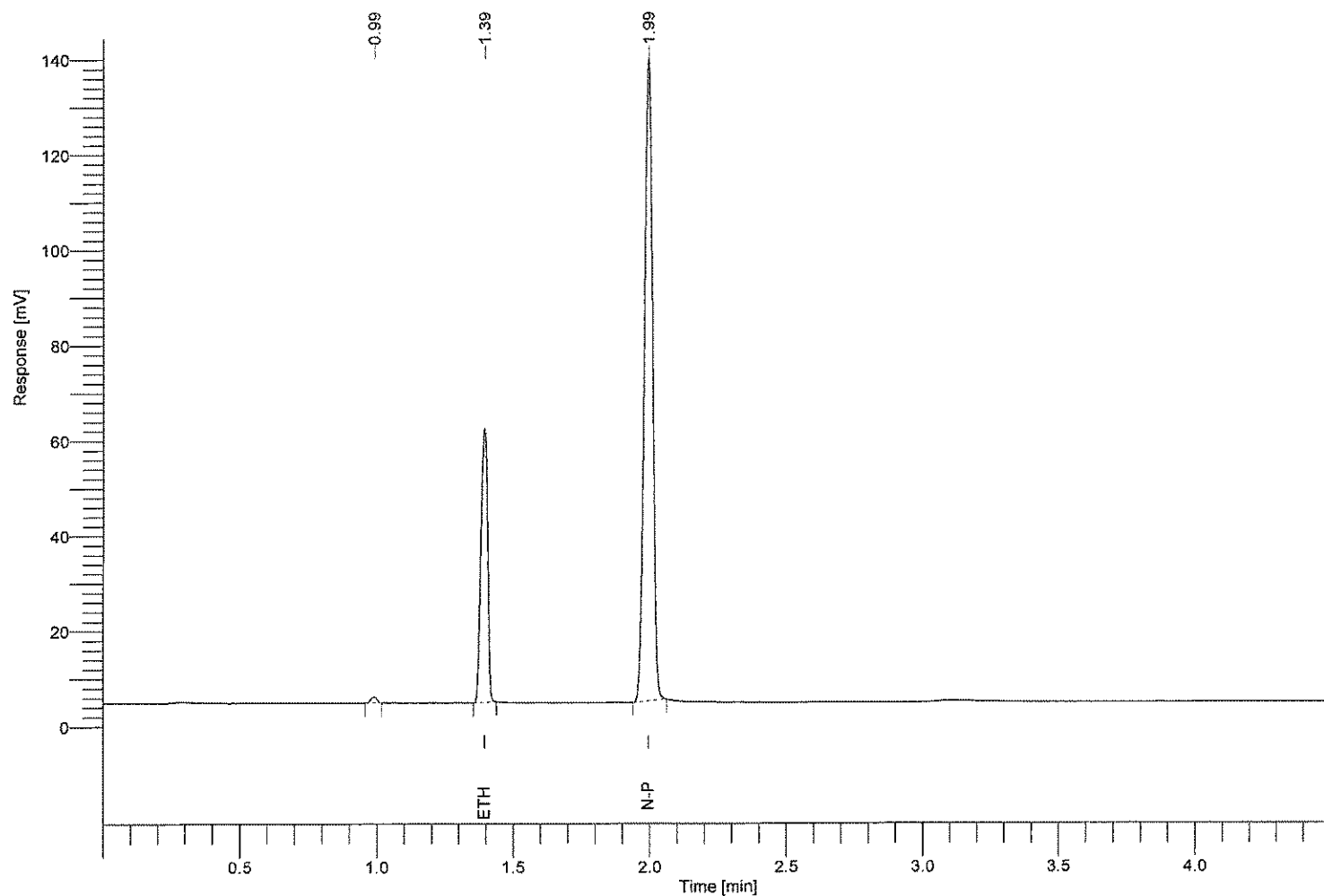


| Component Name | Time [min] | RRt | Area [uV*sec] | Conc. g/100ml |
|----------------|------------|-------|---------------|---------------|
| methanol | 1.220 | ---- | 0.00 | 0.000 |
| ethanol | 1.396 | 0.699 | 99797.75 | 0.242 |
| isopropanol | 1.640 | ---- | 0.00 | 0.000 |
| acetone | 1.910 | ---- | 0.00 | 0.000 |
| n-propanol | 1.997 | 1.000 | 285673.68 | ----- BK |

Software Version : 6.3.2.0646
 Reprocess Number : gc-pc: 612
 Sample Name : 200
 Instrument Name : ClarusGC
 Rack/Vial : 0/0
 Sample Amount : 1.000000
 Cycle : 12

Date : 3/5/2014 1:14:53 PM
 Data Acquisition Time : 3/5/2014 1:10:11 PM
 Channel : A
 Operator : manager
 Dilution Factor : 1.000000

Result File : c:\totalchrom data\03052014\1172.rst
 Sequence File : C:\Totalchrom Sequences\2013\ACS validation\03052014bhk.seq



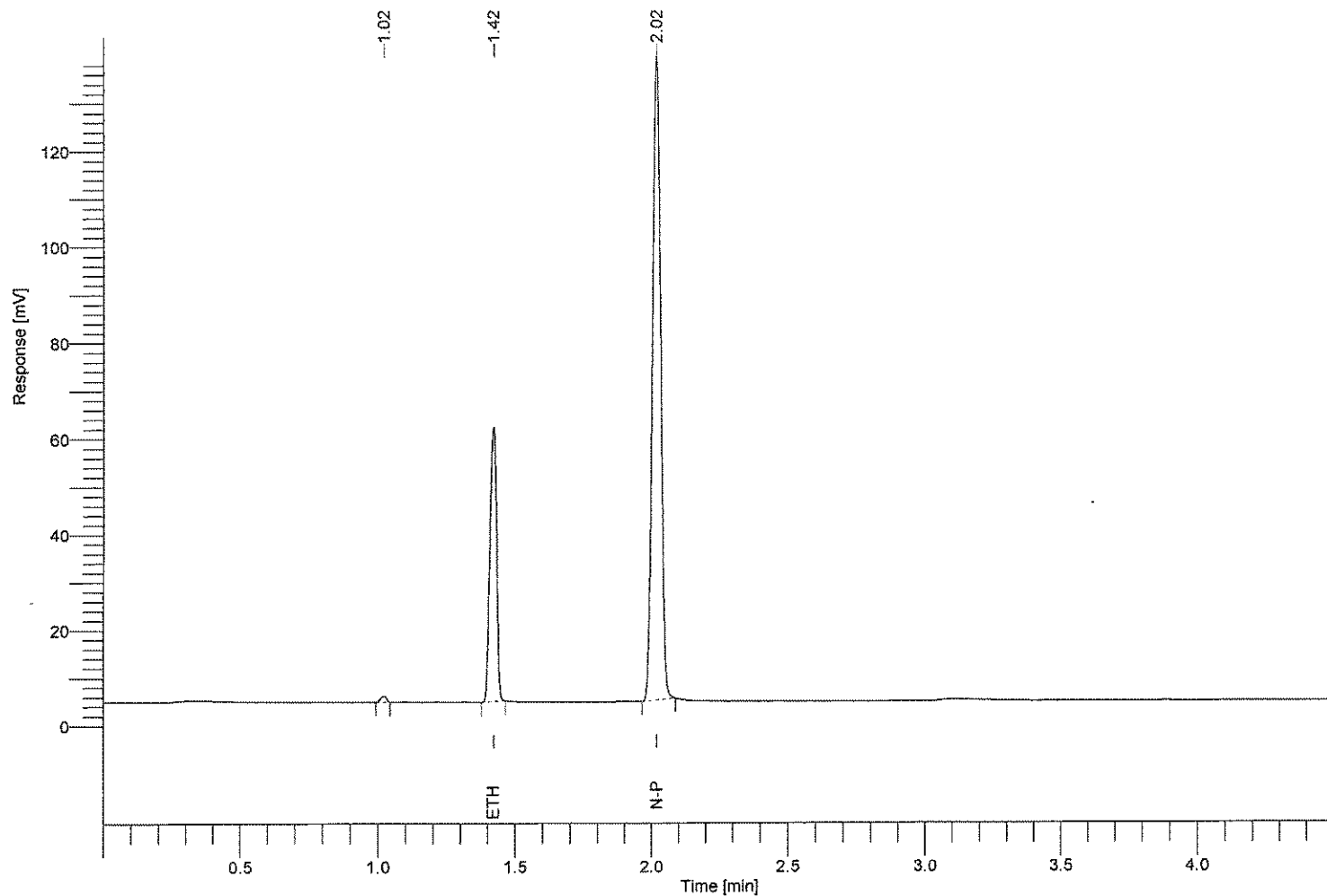
| Component Name | Time [min] | RRt | Area [uV*sec] | Conc. g/100ml |
|----------------|------------|-------|---------------|---------------|
| methanol | 1.220 | ----- | 0.00 | 0.000 |
| ethanol | 1.393 | 0.699 | 99270.53 | 0.242 |
| isopropanol | 1.640 | ----- | 0.00 | 0.000 |
| acetone | 1.910 | ----- | 0.00 | 0.000 |
| n-propanol | 1.994 | 1.000 | 284160.78 | ----- |

lk

Software Version : 6.3.2.0646
Reprocess Number : gc-pc: 613
Sample Name : 200
Instrument Name : ClarusGC
Rack/Vial : 0/0
Sample Amount : 1.000000
Cycle : 13

Date : 3/5/2014 1:19:53 PM
Data Acquisition Time : 3/5/2014 1:15:10 PM
Channel : A
Operator : manager
Dilution Factor : 1.000000

Result File : c:\totalchrom data\03052014\1207.rst
Sequence File : C:\Totalchrom Sequences\2013\ACS validation\03052014bhk.seq



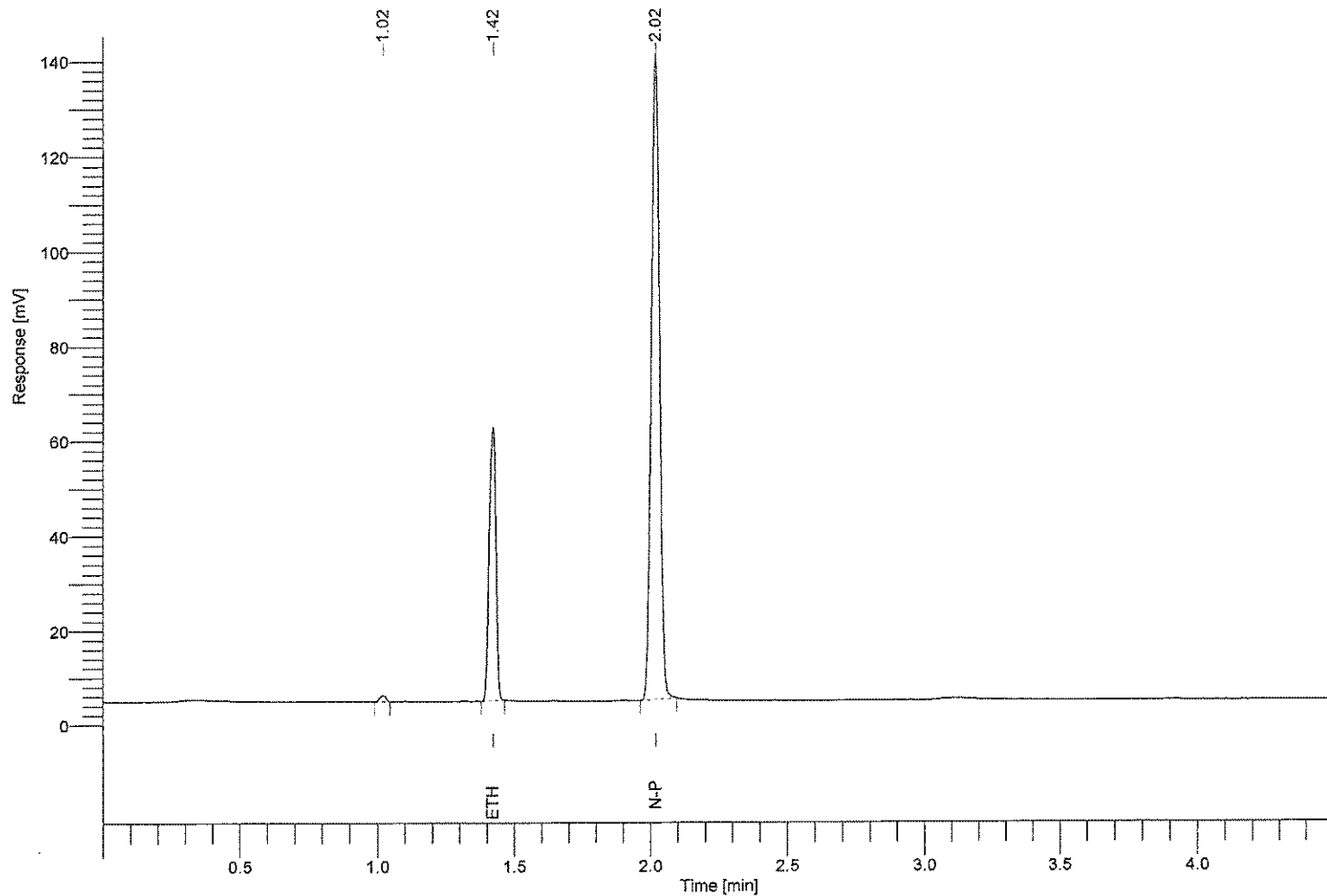
| Component Name | Time [min] | RRt | Area [uV*sec] | Conc. g/100ml |
|----------------|------------|-------|---------------|---------------|
| methanol | 1.220 | ----- | 0.00 | 0.000 |
| ethanol | 1.421 | 0.703 | 98672.62 | 0.243 |
| isopropanol | 1.640 | ----- | 0.00 | 0.000 |
| acetone | 1.910 | ----- | 0.00 | 0.000 |
| n-propanol | 2.019 | 1.000 | 281449.91 | ----- BK |

Software Version : 6.3.2.0646
 Reprocess Number : gc-pc: 614
 Sample Name : 200
 Instrument Name : ClarusGC
 Rack/Vial : 0/0
 Sample Amount : 1.000000
 Cycle : 14

Date : 3/5/2014 1:24:53 PM
 Data Acquisition Time : 3/5/2014 1:20:10 PM
 Channel : A
 Operator : manager
 Dilution Factor : 1.000000

Result File : c:\totalchrom data\03052014\1202.rst

Sequence File : C:\Totalchrom Sequences\2013\ACS validation\03052014bhk.seq



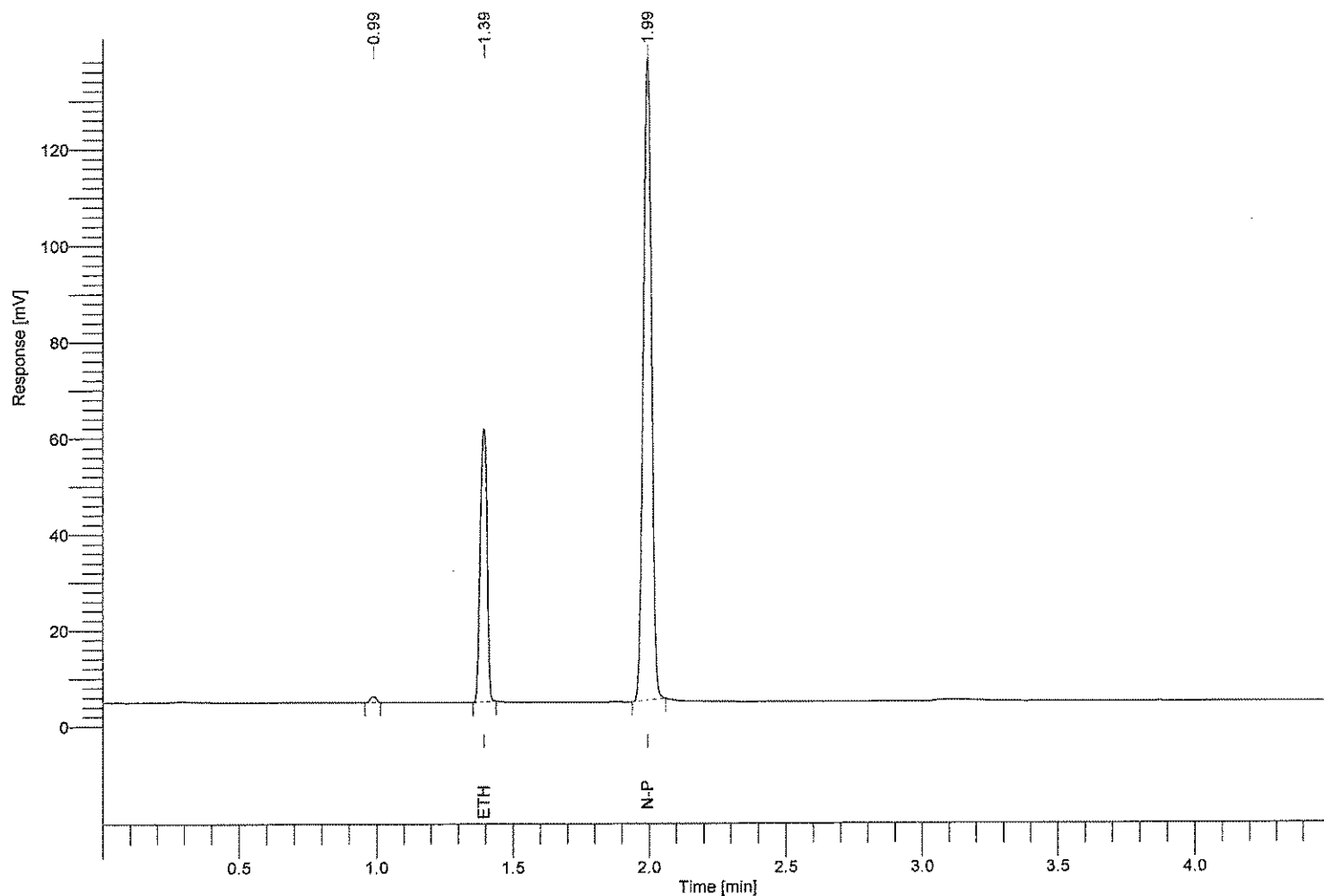
| Component Name | Time [min] | RRt | Area [uV*sec] | Conc. g/100ml |
|----------------|------------|-------|---------------|---------------|
| methanol | 1.220 | ----- | 0.00 | 0.000 |
| ethanol | 1.420 | 0.704 | 100340.07 | 0.242 |
| isopropanol | 1.640 | ----- | 0.00 | 0.000 |
| acetone | 1.910 | ----- | 0.00 | 0.000 |
| n-propanol | 2.019 | 1.000 | 286850.47 | ----- |

BSK

Software Version : 6.3.2.0646
Reprocess Number : gc-pc: 615
Sample Name : 200
Instrument Name : ClarusGC
Rack/Vial : 0/0
Sample Amount : 1.000000
Cycle : 15

Date : 3/5/2014 1:29:53 PM
Data Acquisition Time : 3/5/2014 1:25:10 PM
Channel : A
Operator : manager
Dilution Factor : 1.000000

Result File : c:\totalchrom data\03052014\1203.rst
Sequence File : C:\Totalchrom Sequences\2013\ACS validation\03052014bhk.seq



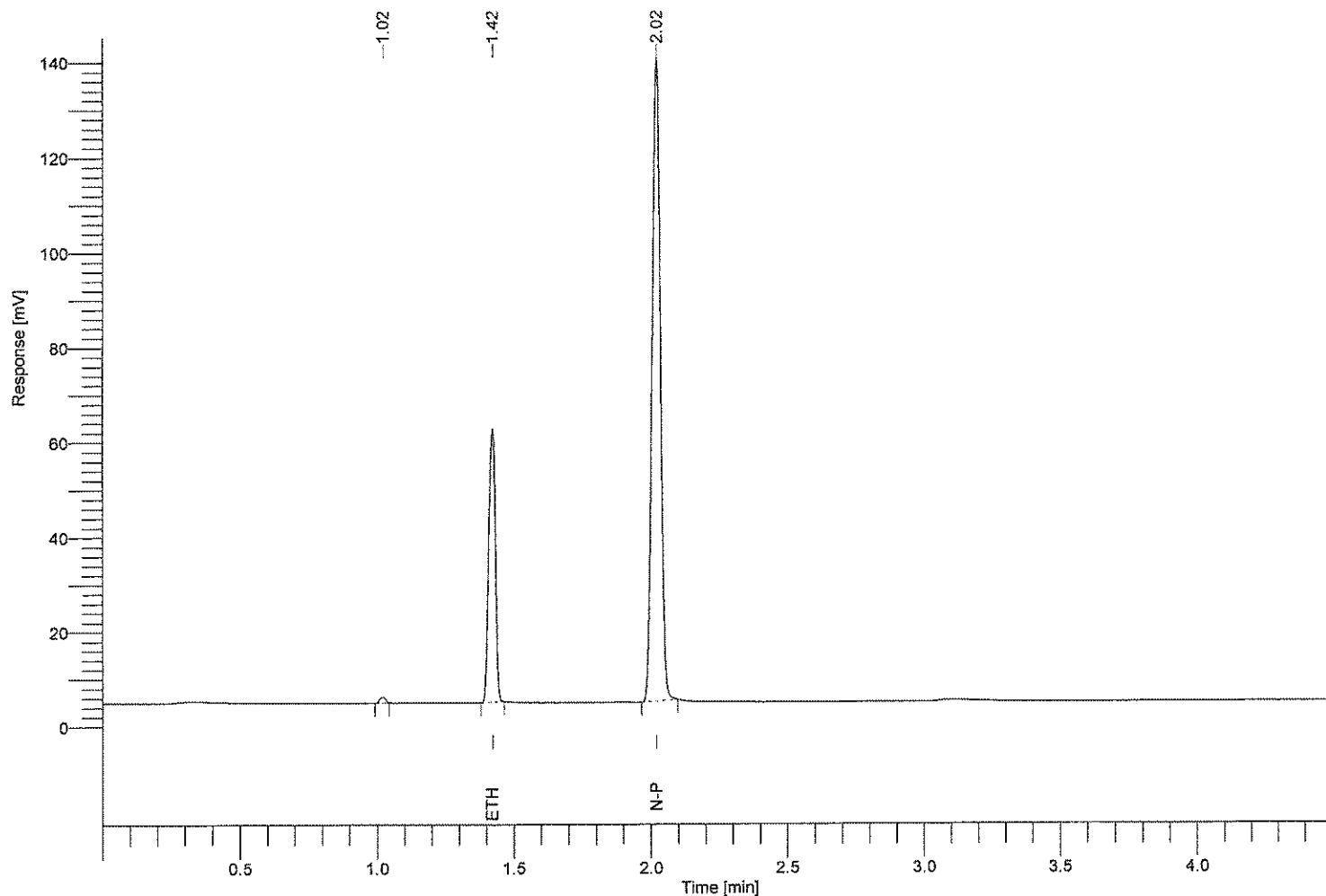
| Component Name | Time [min] | RRt | Area [uV*sec] | Conc. g/100ml |
|----------------|------------|-------|---------------|---------------|
| methanol | 1.220 | ----- | 0.00 | 0.000 |
| ethanol | 1.393 | 0.699 | 98267.41 | 0.242 |
| isopropanol | 1.640 | ----- | 0.00 | 0.000 |
| acetone | 1.910 | ----- | 0.00 | 0.000 |
| n-propanol | 1.994 | 1.000 | 280865.68 | ----- |

BK

Software Version : 6.3.2.0646
 Reprocess Number : gc-pc: 616
 Sample Name : 200
 Instrument Name : ClarusGC
 Rack/Vial : 0/0
 Sample Amount : 1.000000
 Cycle : 16

Date : 3/5/2014 1:34:53 PM
 Data Acquisition Time : 3/5/2014 1:30:10 PM
 Channel : A
 Operator : manager
 Dilution Factor : 1.000000

Result File : c:\totalchrom data\03052014\1197.rst
 Sequence File : C:\Totalchrom Sequences\2013\ACS validation\03052014bhk.seq



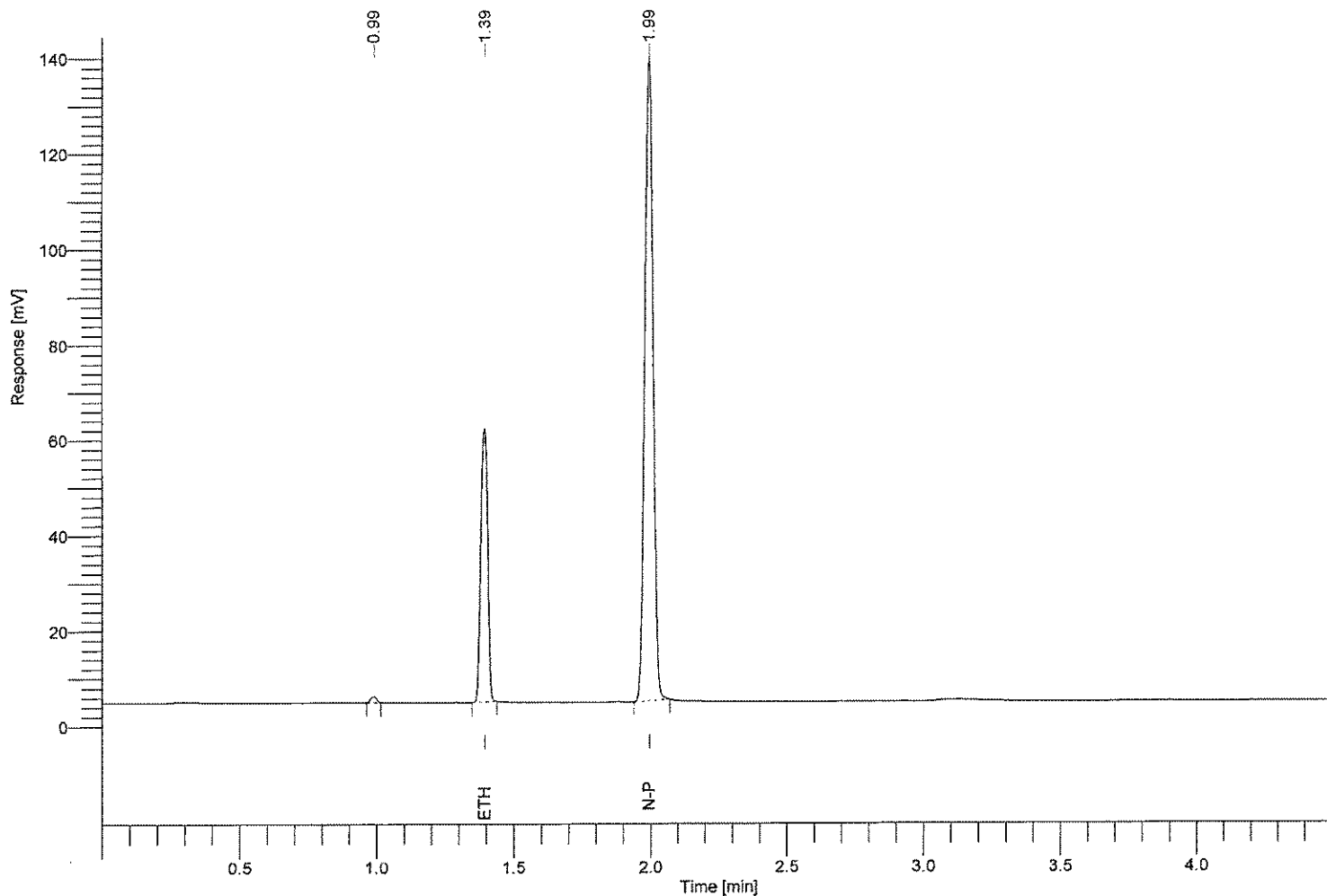
| Component Name | Time [min] | RRt | Area [uV*sec] | Conc. g/100ml |
|----------------|------------|-------|---------------|---------------|
| methanol | 1.220 | ----- | 0.00 | 0.000 |
| ethanol | 1.421 | 0.704 | 99730.14 | 0.242 |
| isopropanol | 1.640 | ----- | 0.00 | 0.000 |
| acetone | 1.910 | ----- | 0.00 | 0.000 |
| n-propanol | 2.019 | 1.000 | 285605.64 | ----- |

BK

Software Version : 6.3.2.0646
 Reprocess Number : gc-pc: 617
 Sample Name : 200
 Instrument Name : ClarusGC
 Rack/Vial : 0/0
 Sample Amount : 1.000000
 Cycle : 17

Date : 3/5/2014 1:39:53 PM
 Data Acquisition Time : 3/5/2014 1:35:10 PM
 Channel : A
 Operator : manager
 Dilution Factor : 1.000000

Result File : c:\totalchrom data\03052014\1198.rst
 Sequence File : C:\Totalchrom Sequences\2013\ACS validation03052014bhk.seq

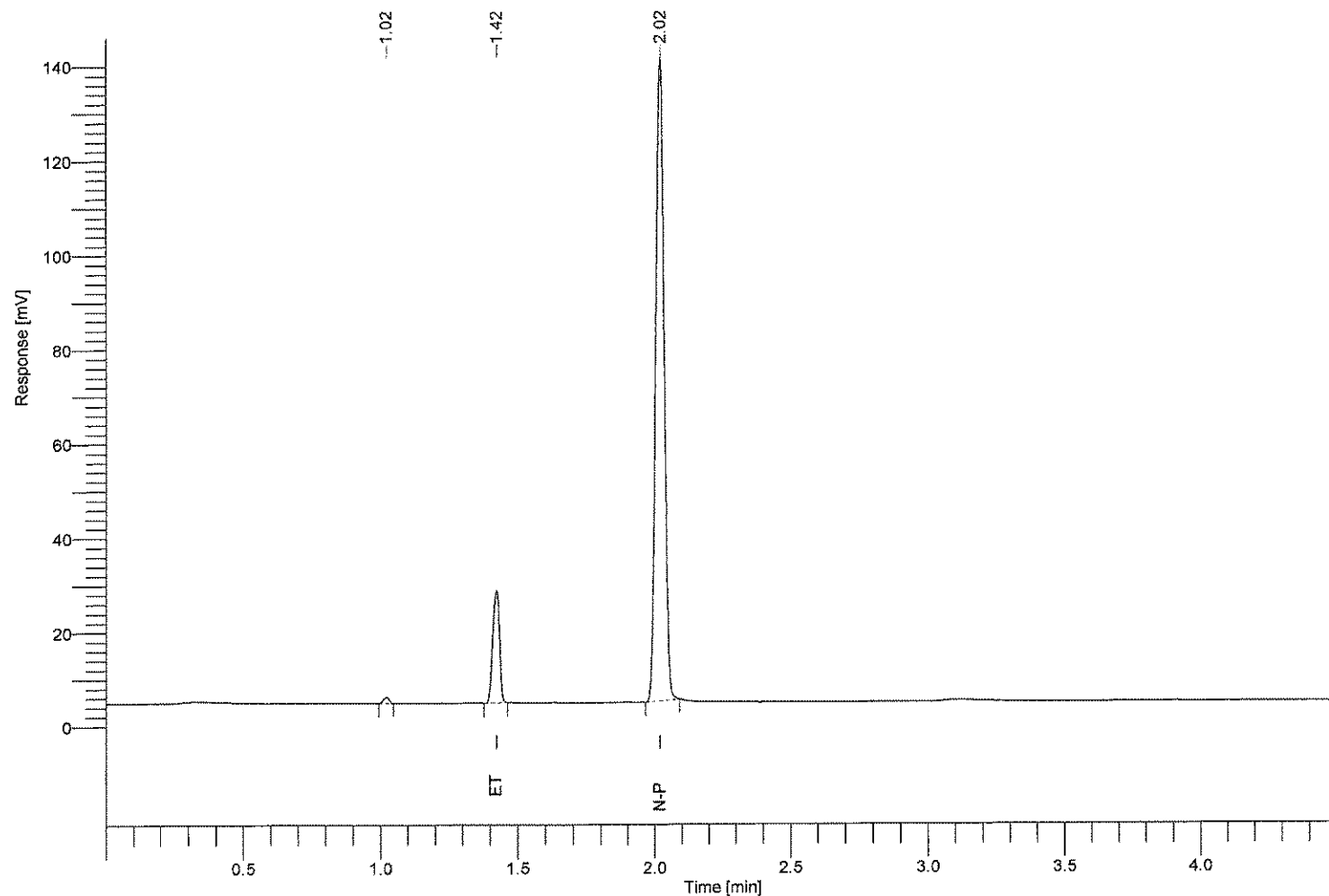


| Component Name | Time [min] | RRt | Area [uV*sec] | Conc. g/100ml |
|----------------|------------|-------|---------------|---------------|
| methanol | 1.220 | ---- | 0.00 | 0.000 |
| ethanol | 1.393 | 0.699 | 99920.55 | 0.242 |
| isopropanol | 1.640 | ---- | 0.00 | 0.000 |
| acetone | 1.910 | ---- | 0.00 | 0.000 |
| n-propanol | 1.994 | 1.000 | 285865.66 | ----- BK |

Software Version : 6.3.2.0646
 Reprocess Number : gc-pc: 618
 Sample Name : RES 100
 Instrument Name : ClarusGC
 Rack/Vial : 0/0
 Sample Amount : 1.000000
 Cycle : 18

Date : 3/5/2014 1:44:52 PM
 Data Acquisition Time : 3/5/2014 1:40:10 PM
 Channel : A
 Operator : manager
 Dilution Factor : 1.000000

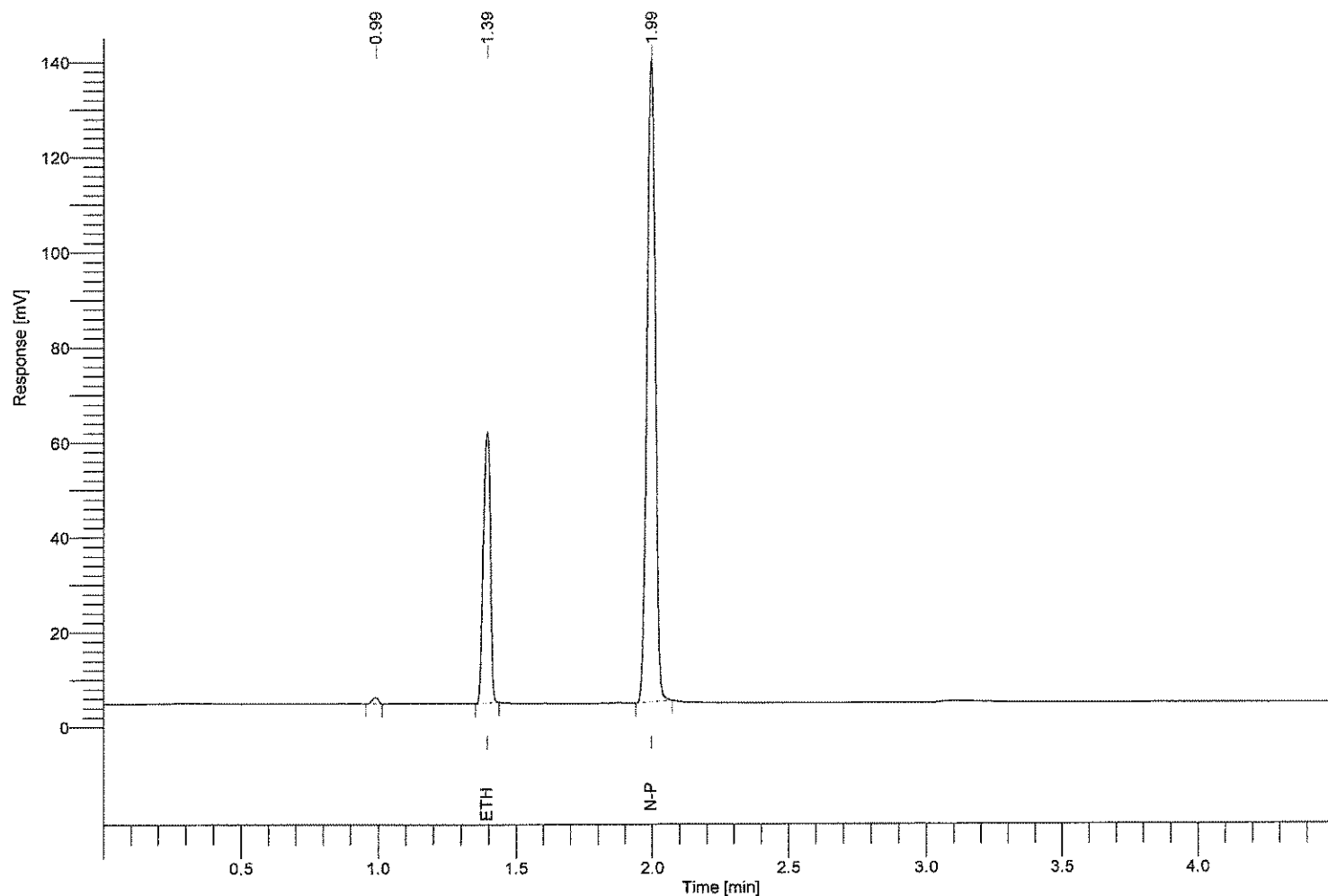
Result File : c:\totalchrom data\03052014\res100.rst
 Sequence File : C:\Totalchrom Sequences\2013\ACS validation\03052014bhk.seq



| Component Name | Time [min] | RRt | Area [uV*sec] | Conc. g/100ml |
|----------------|------------|-------|---------------|---------------|
| methanol | 1.220 | ---- | 0.00 | 0.000 |
| ethanol | 1.421 | 0.704 | 41412.74 | 0.100 |
| isopropanol | 1.640 | ---- | 0.00 | 0.000 |
| acetone | 1.910 | ---- | 0.00 | 0.000 |
| n-propanol | 2.019 | 1.000 | 287960.30 | ----- BK |

Software Version : 6.3.2.0646 Date : 3/5/2014 1:49:53 PM
 Reprocess Number : gc-pc: 619
 Sample Name : 200 Data Acquisition Time : 3/5/2014 1:45:10 PM
 Instrument Name : ClarusGC Channel : A
 Rack/Vial : 0/0 Operator : manager
 Sample Amount : 1.000000 Dilution Factor : 1.000000
 Cycle : 19

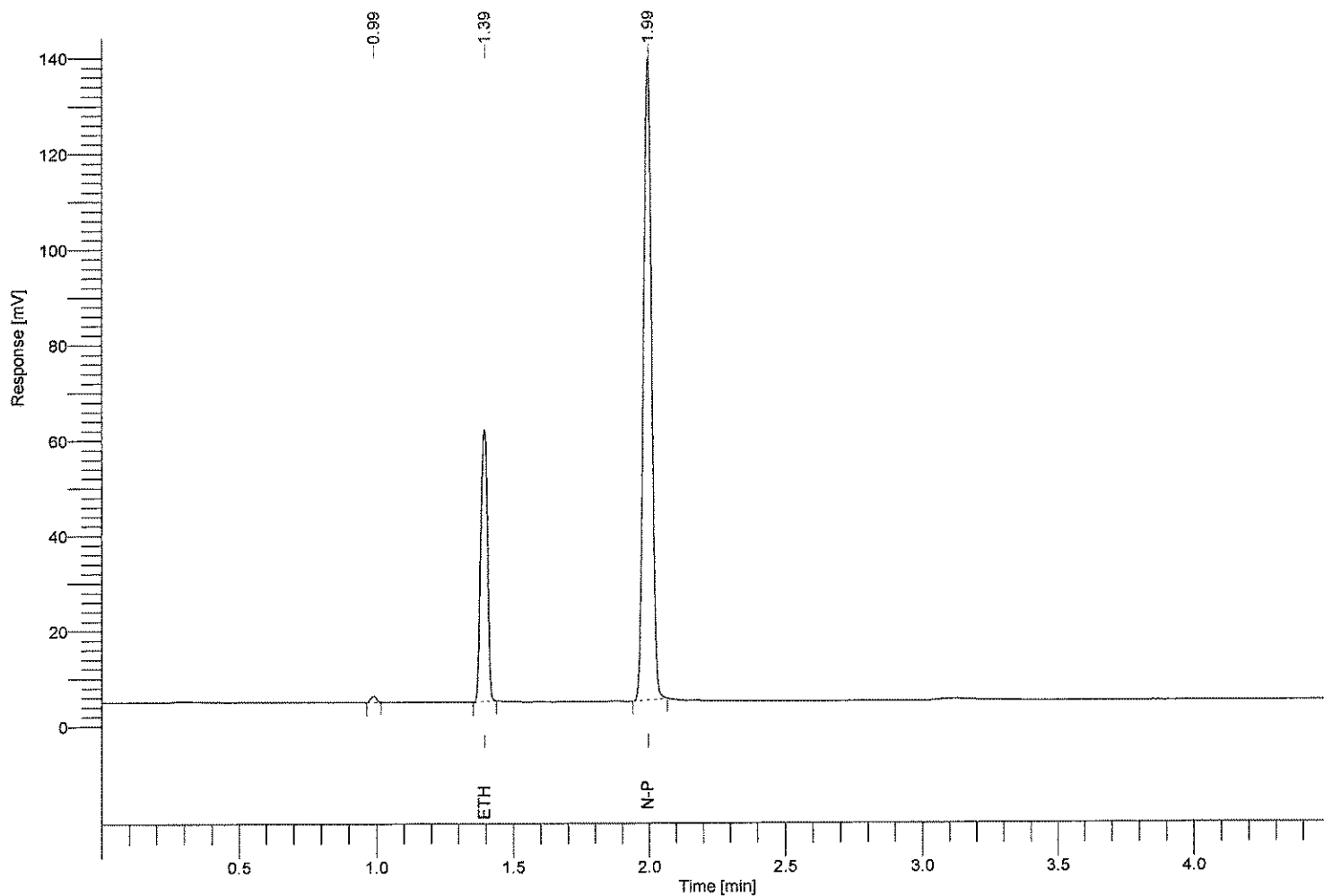
Result File : c:\totalchrom data\03052014\1206-20140305-134953.rst
 Sequence File : C:\Totalchrom Sequences\2013\ACS validation\03052014bhk.seq



| Component Name | Time [min] | RRt | Area [uV*sec] | Conc. g/100ml |
|----------------|------------|-------|---------------|---------------|
| methanol | 1.220 | ----- | 0.00 | 0.000 |
| ethanol | 1.393 | 0.699 | 100023.04 | 0.240 |
| isopropanol | 1.640 | ----- | 0.00 | 0.000 |
| acetone | 1.910 | ----- | 0.00 | 0.000 |
| n-propanol | 1.994 | 1.000 | 288351.99 | ----- BK |

Software Version : 6.3.2.0646 Date : 3/5/2014 1:54:52 PM
 Reprocess Number : gc-pc: 620
 Sample Name : 200
 Instrument Name : ClarusGC Data Acquisition Time : 3/5/2014 1:50:10 PM
 Rack/Vial : 0/0 Channel : A
 Sample Amount : 1.000000 Operator : manager
 Cycle : 20 Dilution Factor : 1.000000

Result File : c:\totalchrom data\03052014\1200-20140305-135452.rst
 Sequence File : C:\Totalchrom Sequences\2013\ACS validation\03052014bhk.seq



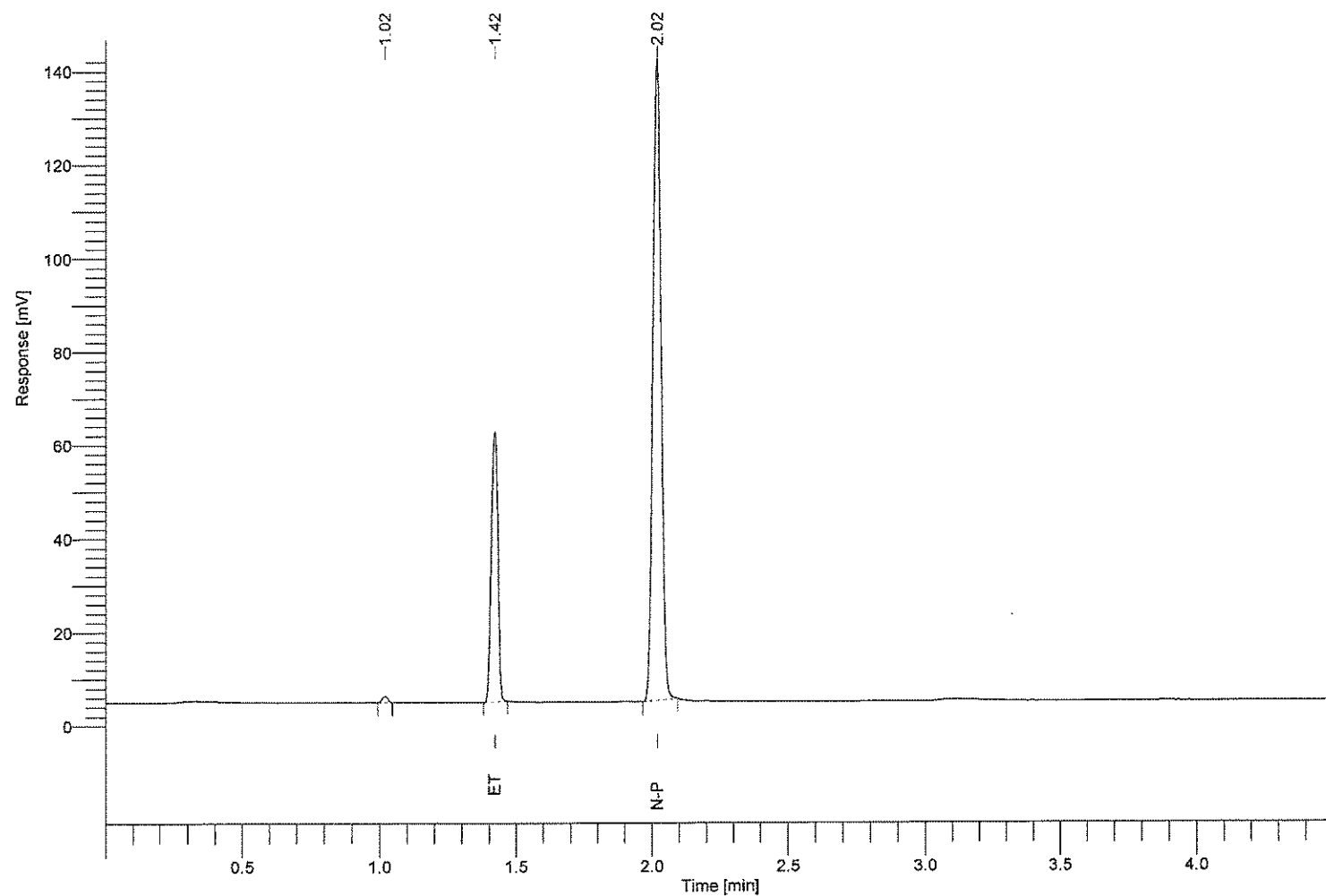
| Component Name | Time [min] | RRt | Area [uV*sec] | Conc. g/100ml |
|----------------|------------|-------|---------------|---------------|
| methanol | 1.220 | ----- | 0.00 | 0.000 |
| ethanol | 1.393 | 0.699 | 98727.83 | 0.241 |
| isopropanol | 1.640 | ----- | 0.00 | 0.000 |
| acetone | 1.910 | ----- | 0.00 | 0.000 |
| n-propanol | 1.994 | 1.000 | 283532.80 | ----- |

KK

Software Version : 6.3.2.0646
 Reprocess Number : gc-pc: 621
 Sample Name : 200
 Instrument Name : ClarusGC
 Rack/Vial : 0/0
 Sample Amount : 1.000000
 Cycle : 21

Date : 3/5/2014 1:59:53 PM
 Data Acquisition Time : 3/5/2014 1:55:10 PM
 Channel : A
 Operator : manager
 Dilution Factor : 1.000000

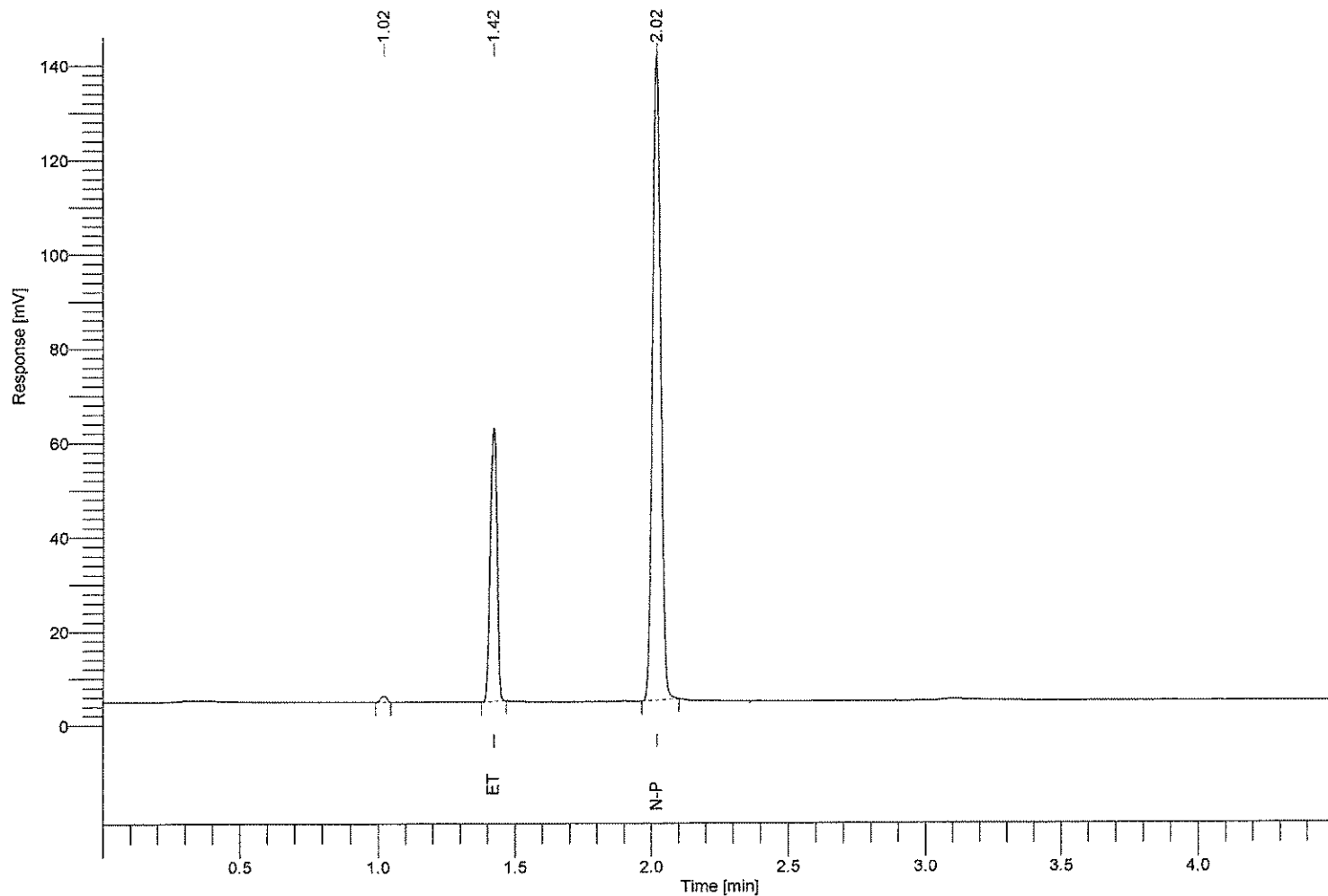
Result File : c:\totalchrom data\03052014\1201-20140305-135953.rst
 Sequence File : C:\Totalchrom Sequences\2013\ACS validation\03052014bhk.seq



| Component Name | Time [min] | RRt | Area [uV*sec] | Conc. g/100ml |
|----------------|------------|-------|---------------|-----------------|
| methanol | 1.220 | ----- | 0.00 | 0.000 |
| ethanol | 1.420 | 0.703 | 100283.13 | 0.241 |
| isopropanol | 1.640 | ----- | 0.00 | 0.000 |
| acetone | 1.910 | ----- | 0.00 | 0.000 |
| n-propanol | 2.019 | 1.000 | 288806.80 | ----- <i>BK</i> |

Software Version : 6.3.2.0646 Date : 3/5/2014 2:04:52 PM
Reprocess Number : gc-pc: 622
Sample Name : 200
Instrument Name : ClarusGC Data Acquisition Time : 3/5/2014 2:00:10 PM
Rack/Vial : 0/0 Channel : A
Sample Amount : 1.000000 Operator : manager
Cycle : 22 Dilution Factor : 1.000000

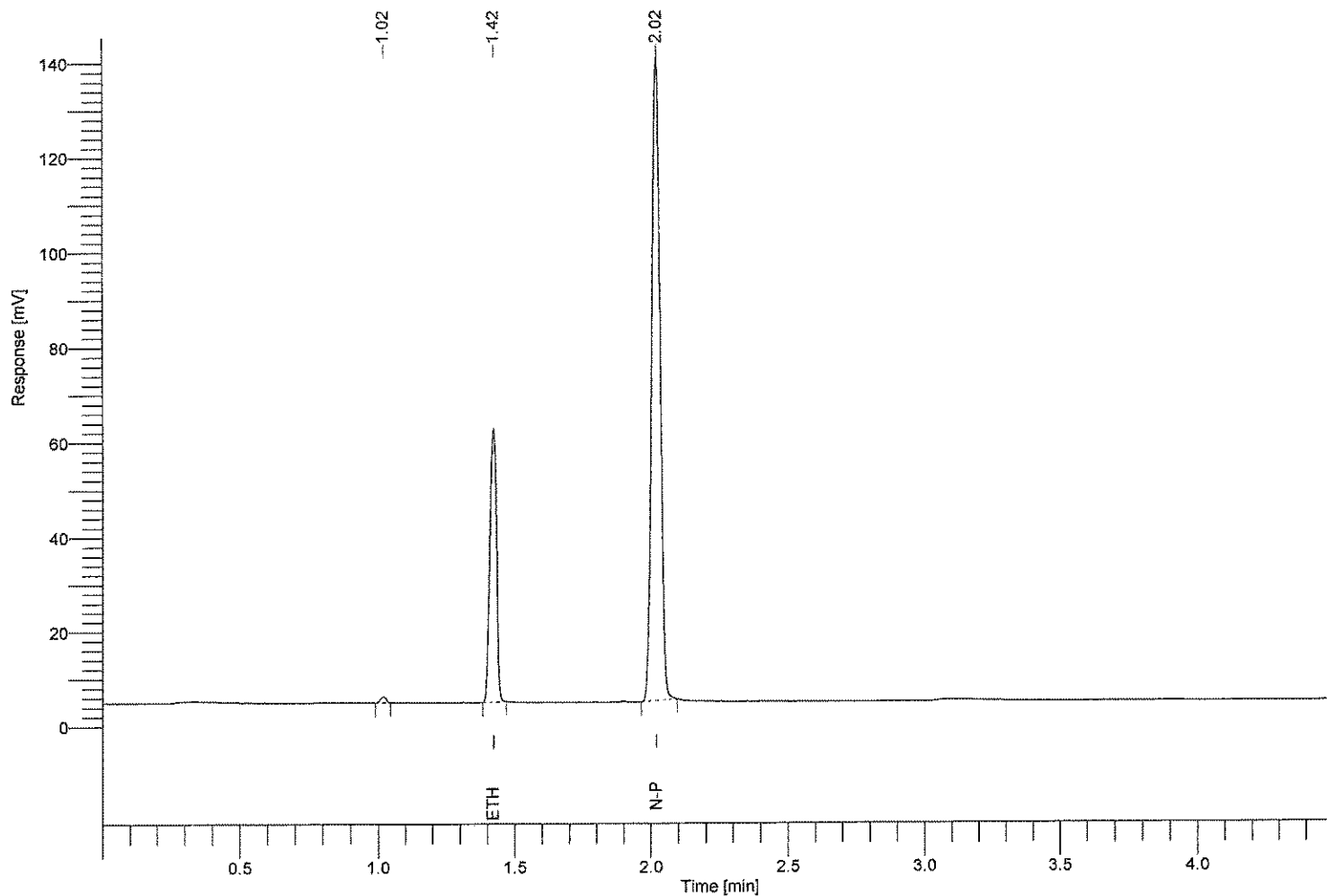
Result File : c:\totalchrom data\03052014\1205-20140305-140452.rst
Sequence File : C:\Totalchrom Sequences\2013\ACS validation\03052014bhk.seq



| Component Name | Time [min] | RRt | Area [uV*sec] | Conc. g/100ml |
|----------------|------------|-------|---------------|---------------|
| methanol | 1.220 | ---- | 0.00 | 0.000 |
| ethanol | 1.421 | 0.704 | 100751.12 | 0.241 |
| isopropanol | 1.640 | ---- | 0.00 | 0.000 |
| acetone | 1.910 | ---- | 0.00 | 0.000 |
| n-propanol | 2.020 | 1.000 | 289313.10 | ----- BK |

Software Version : 6.3.2.0646 Date : 3/5/2014 2:09:53 PM
Reprocess Number : gc-pc: 623
Sample Name : 200
Instrument Name : ClarusGC Data Acquisition Time : 3/5/2014 2:05:09 PM
Rack/Vial : 0/0 Channel : A
Sample Amount : 1.000000 Operator : manager
Cycle : 23 Dilution Factor : 1.000000

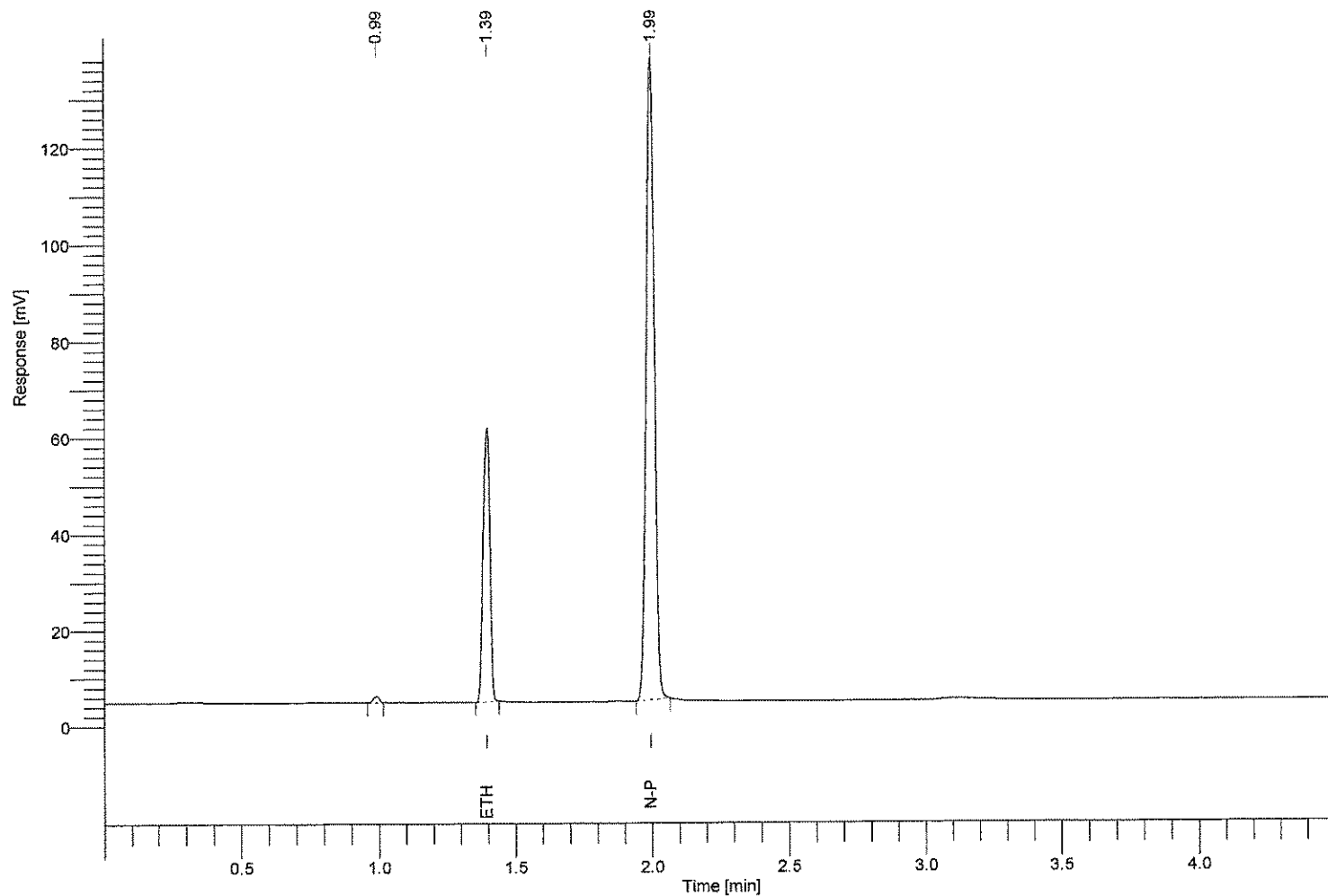
Result File : c:\totalchrom data\03052014\1172-20140305-140953.rst
Sequence File : C:\Totalchrom Sequences\2013\ACS validation\03052014bhk.seq



| Component Name | Time [min] | RRt | Area [uV*sec] | Conc. g/100ml |
|----------------|------------|-------|---------------|-----------------|
| methanol | 1.220 | ----- | 0.00 | 0.000 |
| ethanol | 1.421 | 0.704 | 99442.99 | 0.242 |
| isopropanol | 1.640 | ----- | 0.00 | 0.000 |
| acetone | 1.910 | ----- | 0.00 | 0.000 |
| n-propanol | 2.019 | 1.000 | 285055.91 | ----- <i>JK</i> |

Software Version : 6.3.2.0646 Date : 3/5/2014 2:14:53 PM
 Reprocess Number : gc-pc: 624
 Sample Name : 200 Data Acquisition Time : 3/5/2014 2:10:09 PM
 Instrument Name : ClarusGC Channel : A
 Rack/Vial : 0/0 Operator : manager
 Sample Amount : 1.000000 Dilution Factor : 1.000000
 Cycle : 24

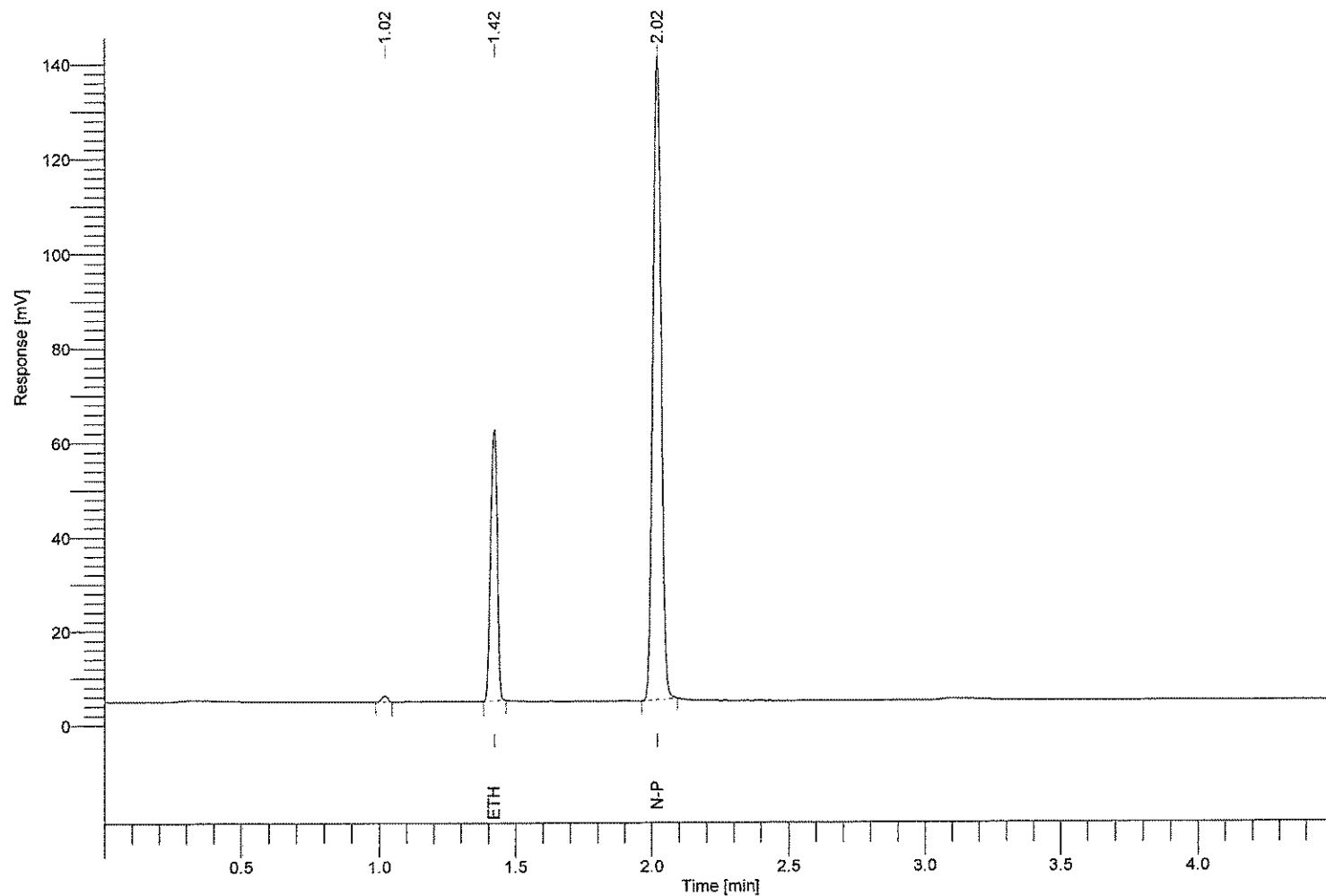
Result File : c:\totalchrom data\03052014\1207-20140305-141453.rst
 Sequence File : C:\Totalchrom Sequences\2013\ACS validation\03052014bhk.seq



| Component Name | Time [min] | RRt | Area [uV*sec] | Conc. g/100ml |
|----------------|------------|-------|---------------|---------------|
| methanol | 1.220 | ----- | 0.00 | 0.000 |
| ethanol | 1.393 | 0.699 | 98241.44 | 0.243 |
| isopropanol | 1.640 | ----- | 0.00 | 0.000 |
| acetone | 1.910 | ----- | 0.00 | 0.000 |
| n-propanol | 1.994 | 1.000 | 280172.55 | ----- BK |

Software Version : 6.3.2.0646 Date : 3/5/2014 2:19:53 PM
Reprocess Number : gc-pc: 625
Sample Name : 200
Instrument Name : ClarusGC Data Acquisition Time : 3/5/2014 2:15:09 PM
Rack/Vial : 0/0 Channel : A
Sample Amount : 1.000000 Operator : manager
Cycle : 25 Dilution Factor : 1.000000

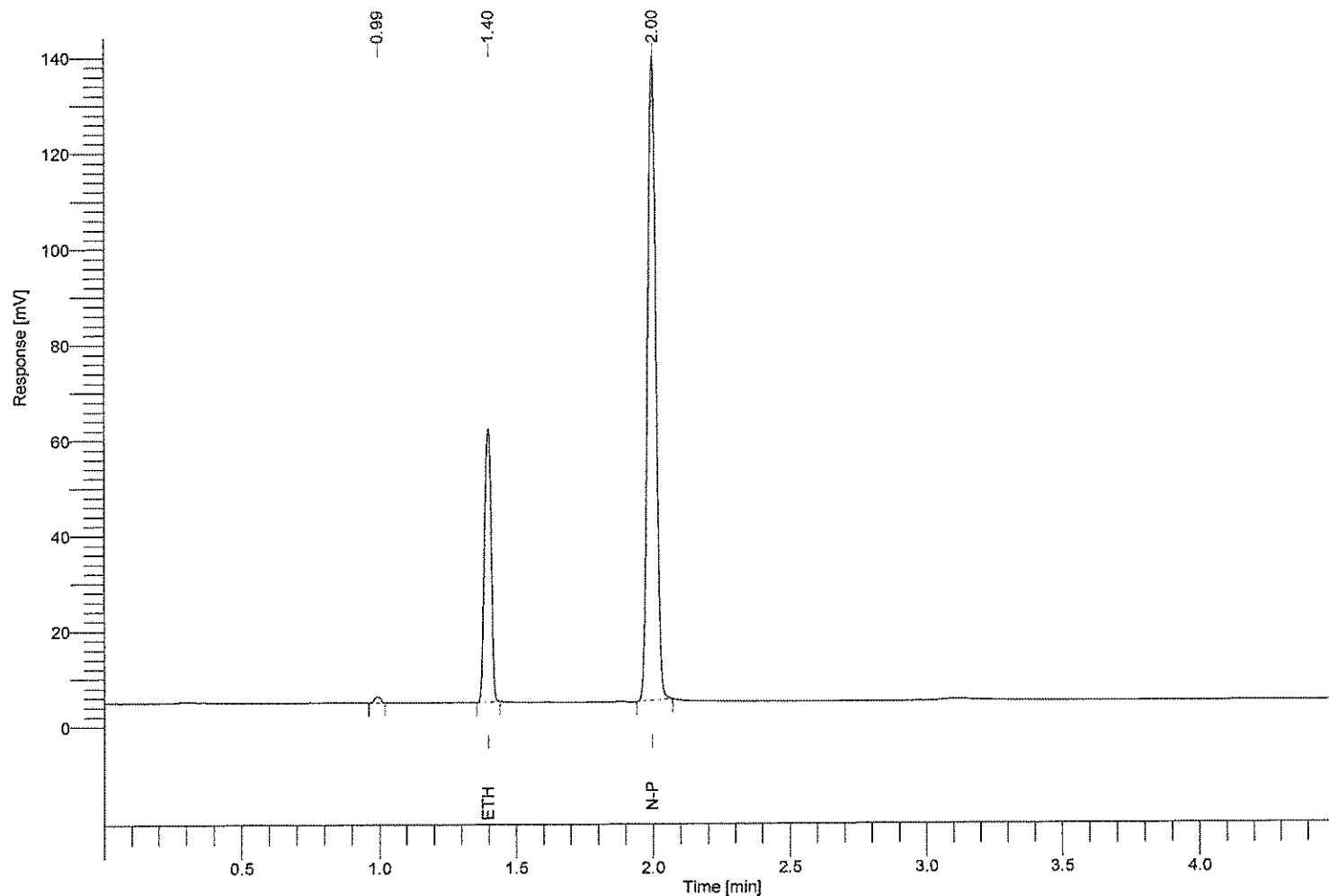
Result File : c:\totalchrom data\03052014\1202-20140305-141953.rst
Sequence File : C:\Totalchrom Sequences\2013\ACS validation\03052014bhk.seq



| Component Name | Time [min] | RRt | Area [uV*sec] | Conc. g/100ml |
|----------------|------------|-------|---------------|-----------------|
| methanol | 1.220 | ----- | 0.00 | 0.000 |
| ethanol | 1.420 | 0.703 | 98888.02 | 0.240 |
| isopropanol | 1.640 | ----- | 0.00 | 0.000 |
| acetone | 1.910 | ----- | 0.00 | 0.000 |
| n-propanol | 2.019 | 1.000 | 284930.23 | ----- <i>BK</i> |

Software Version : 6.3.2.0646 Date : 3/5/2014 2:24:53 PM
Reprocess Number : gc-pc: 626
Sample Name : 200
Instrument Name : ClarusGC Data Acquisition Time : 3/5/2014 2:20:09 PM
Rack/Vial : 0/0 Channel : A
Sample Amount : 1.000000 Operator : manager
Cycle : 26 Dilution Factor : 1.000000

Result File : c:\totalchrom data\03052014\1203-20140305-142453.rst
Sequence File : C:\Totalchrom Sequences\2013\ACS validation\03052014bhk.seq

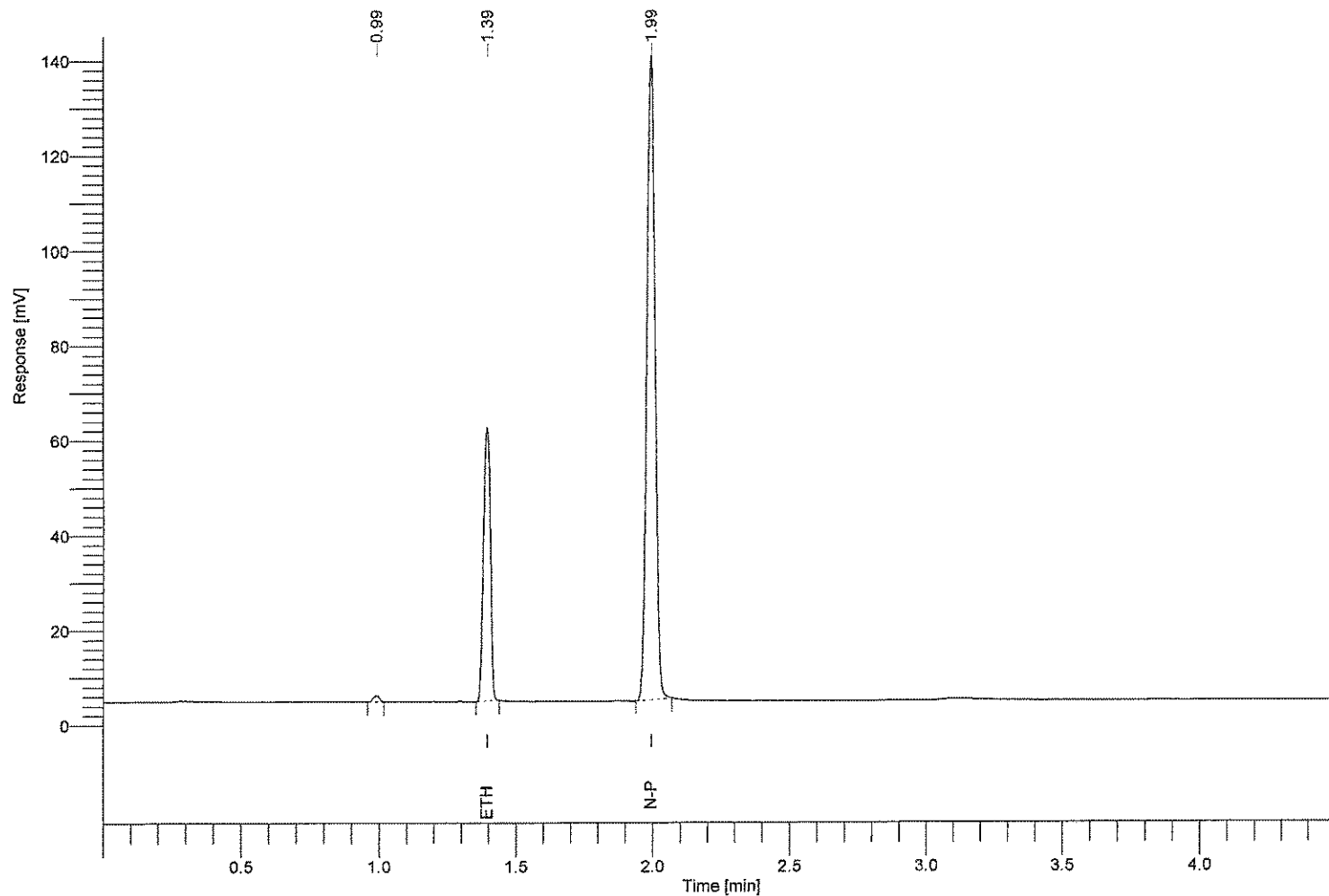


| Component Name | Time [min] | RRt | Area [$\mu\text{V}\cdot\text{sec}$] | Conc. g/100ml |
|----------------|------------|-------|---------------------------------------|---------------|
| methanol | 1.220 | ---- | 0.00 | 0.000 |
| ethanol | 1.396 | 0.699 | 98831.80 | 0.242 |
| isopropanol | 1.640 | ---- | 0.00 | 0.000 |
| acetone | 1.910 | ---- | 0.00 | 0.000 |
| n-propanol | 1.997 | 1.000 | 282984.05 | ----- BK |

Software Version : 6.3.2.0646
 Reprocess Number : gc-pc: 627
 Sample Name : 200
 Instrument Name : ClarusGC
 Rack/Vial : 0/0
 Sample Amount : 1.000000
 Cycle : 27

Date : 3/5/2014 2:29:53 PM
 Data Acquisition Time : 3/5/2014 2:25:09 PM
 Channel : A
 Operator : manager
 Dilution Factor : 1.000000

Result File : c:\totalchrom data\03052014\1197-20140305-142953.rst
 Sequence File : C:\Totalchrom Sequences\2013\ACS validation\03052014bhk.seq

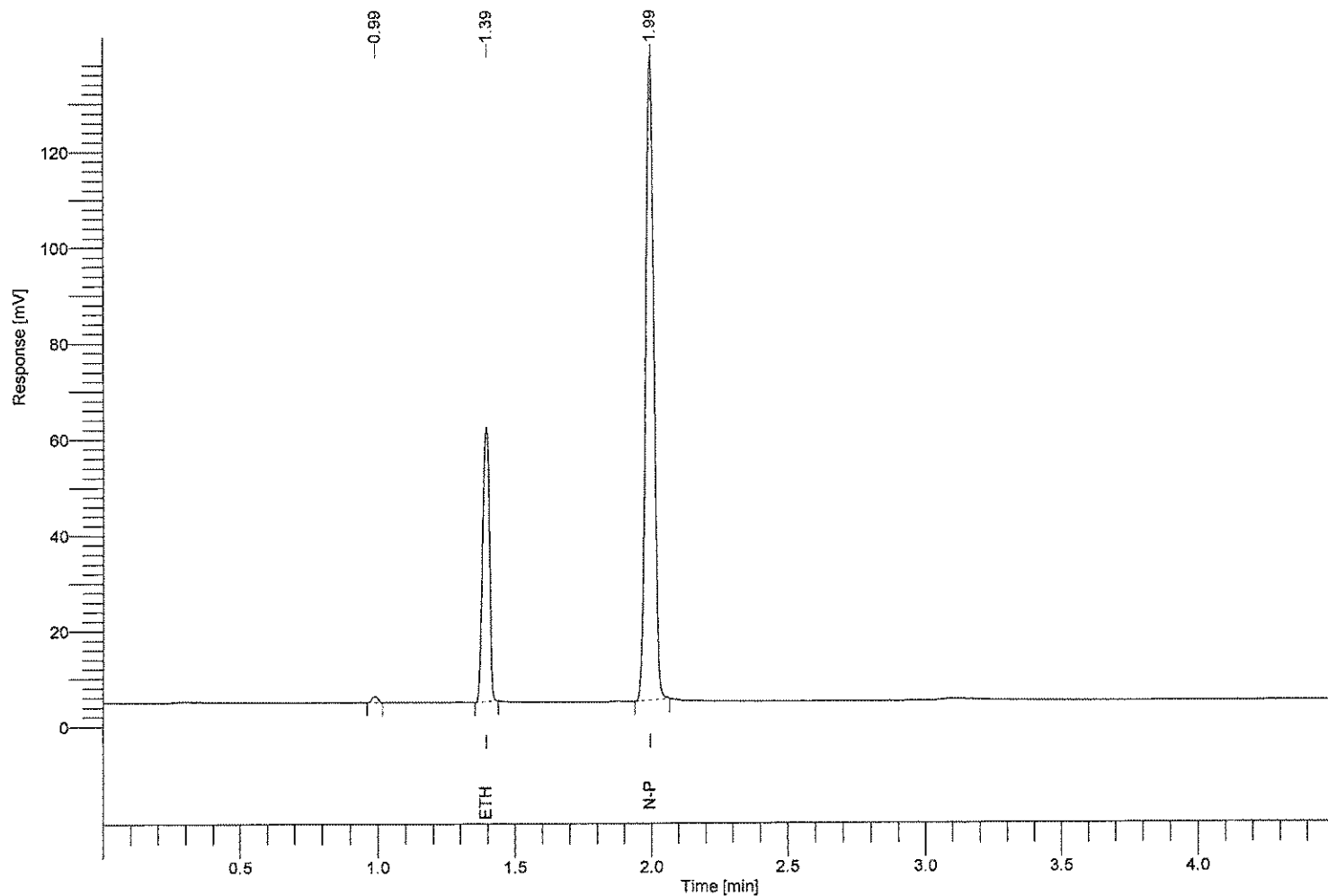


| Component Name | Time [min] | RRt | Area [uV*sec] | Conc. g/100ml |
|----------------|------------|-------|---------------|-----------------|
| methanol | 1.220 | ----- | 0.00 | 0.000 |
| ethanol | 1.393 | 0.699 | 100029.03 | 0.241 |
| isopropanol | 1.640 | ----- | 0.00 | 0.000 |
| acetone | 1.910 | ----- | 0.00 | 0.000 |
| n-propanol | 1.994 | 1.000 | 287053.27 | ----- <i>BK</i> |

Software Version : 6.3.2.0646
 Reprocess Number : gc-pc: 628
 Sample Name : 200
 Instrument Name : ClarusGC
 Rack/Vial : 0/0
 Sample Amount : 1.000000
 Cycle : 28

Date : 3/5/2014 2:34:52 PM
 Data Acquisition Time : 3/5/2014 2:30:09 PM
 Channel : A
 Operator : manager
 Dilution Factor : 1.000000

Result File : c:\totalchrom data\03052014\1198-20140305-143452.rst
 Sequence File : C:\Totalchrom Sequences\2013\ACS validation\03052014bhk.seq

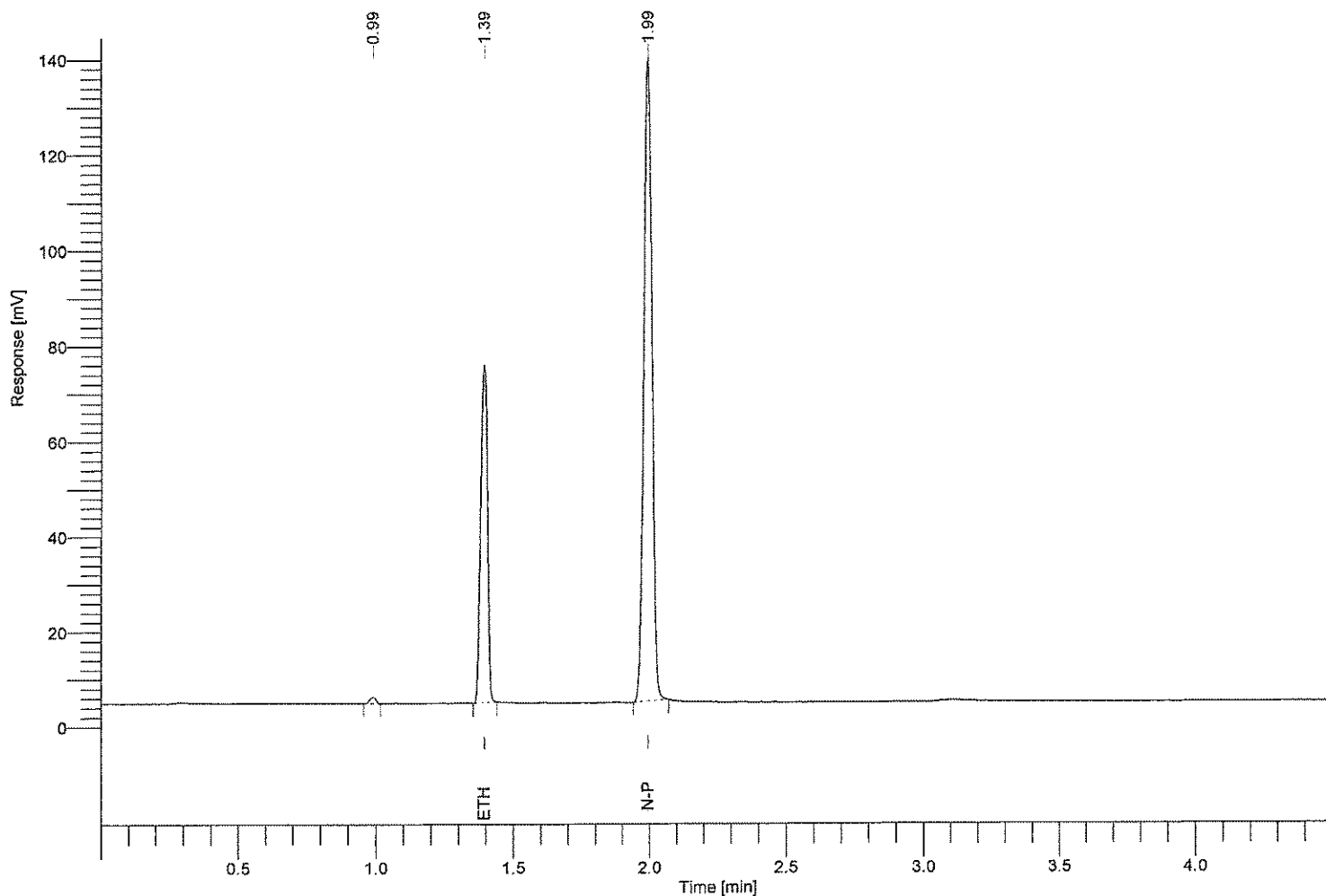


| Component Name | Time [min] | RRt | Area [uV*sec] | Conc. g/100ml |
|----------------|------------|-------|---------------|-----------------|
| methanol | 1.220 | ---- | 0.00 | 0.000 |
| ethanol | 1.393 | 0.699 | 98631.11 | 0.242 |
| isopropanol | 1.640 | ---- | 0.00 | 0.000 |
| acetone | 1.910 | ---- | 0.00 | 0.000 |
| n-propanol | 1.994 | 1.000 | 282328.36 | ----- <i>th</i> |

Software Version : 6.3.2.0646
 Reprocess Number : gc-pc: 629
 Sample Name : RES 300
 Instrument Name : ClarusGC
 Rack/Vial : 0/0
 Sample Amount : 1.000000
 Cycle : 29

Date : 3/5/2014 2:39:53 PM
 Data Acquisition Time : 3/5/2014 2:35:09 PM
 Channel : A
 Operator : manager
 Dilution Factor : 1.000000

Result File : c:\totalchrom data\03052014\res300.rst
 Sequence File : C:\Totalchrom Sequences\2013\ACS validation\03052014bhk.seq



| Component Name | Time [min] | RRt | Area [uV*sec] | Conc. g/100ml |
|----------------|------------|-------|---------------|---------------|
| methanol | 1.220 | ----- | 0.00 | 0.000 |
| ethanol | 1.393 | 0.699 | 122911.57 | 0.299 |
| isopropanol | 1.640 | ----- | 0.00 | 0.000 |
| acetone | 1.910 | ----- | 0.00 | 0.000 |
| n-propanol | 1.994 | 1.000 | 285009.32 | ----- |

KK