

Distillation: Identification of two unknowns

Identities (Based on BP):

- Unknown A = Hexane (68.8°C)
- Unknown B = Heptane (98.4°C)

Identities (Based on GC retention times):

- Unknown A = Heptane
- Unknown B = Toluene

Actual unknown Identities:

- Heptane and Toluene

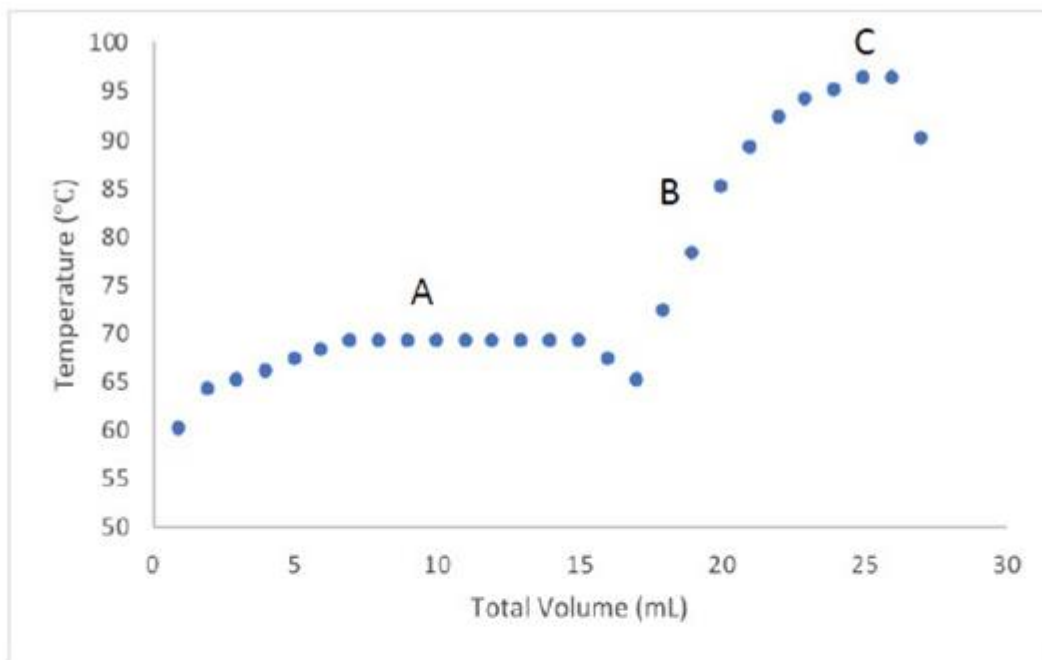
Percent Composition (Based on GC data):

- Unknown A = 49%
- Unknown B = 51%

Actual Percent Composition:

- Heptane = 50%
- Toluene = 50%

Volume Collected (mL)	Temperature (°C)
1	60
2	64
3	65
4	66
5	67
6	68
7	69
8	69
9	69
10	69
11	69
12	69
13	69
14	69
15	69
16	67
17	65
18	72
19	78
20	85
21	89
22	92
23	94
24	95
25	96
26	96
27	90



Fraction	Volume (mL)	Retention Time (min) Peak 1	Retention Time (min) Peak 1	% Peak Area Peak 1	% Peak Area Peak 1
A	14	0.898	0.935	78395	21.05
B	13	0.892	0.929	22.71	77.29
C	1.5	0.893	0.933	5	95

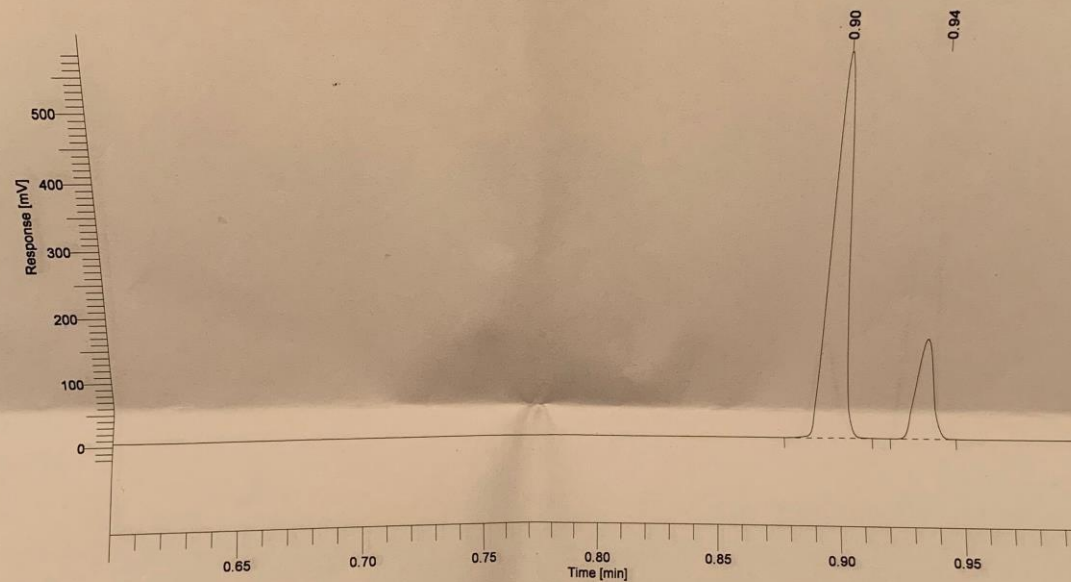
*GC #7 was used to collect data

Software Version : 6.3.2.0646
Reprocess Number : desktop-1f8tc2t: 1023
Sample Name :
Instrument Name : GC
Rack/Vial : 0/0
Sample Amount : 1.000000
Cycle : 1

Date : 9/25/2020 4:00:06 PM

Data Acquisition Time : 9/25/2020 3:58:53 PM
Channel : A
Operator : labuser
Dilution Factor : 1.000000

Result File : C:\TC Data\Data\Fractional Distillation_A_001-20200925-160006.rst
Sequence File : C:\TC Data\Sequences\GC_TMP-20200925-134539.SEQ



AREA% REPORT

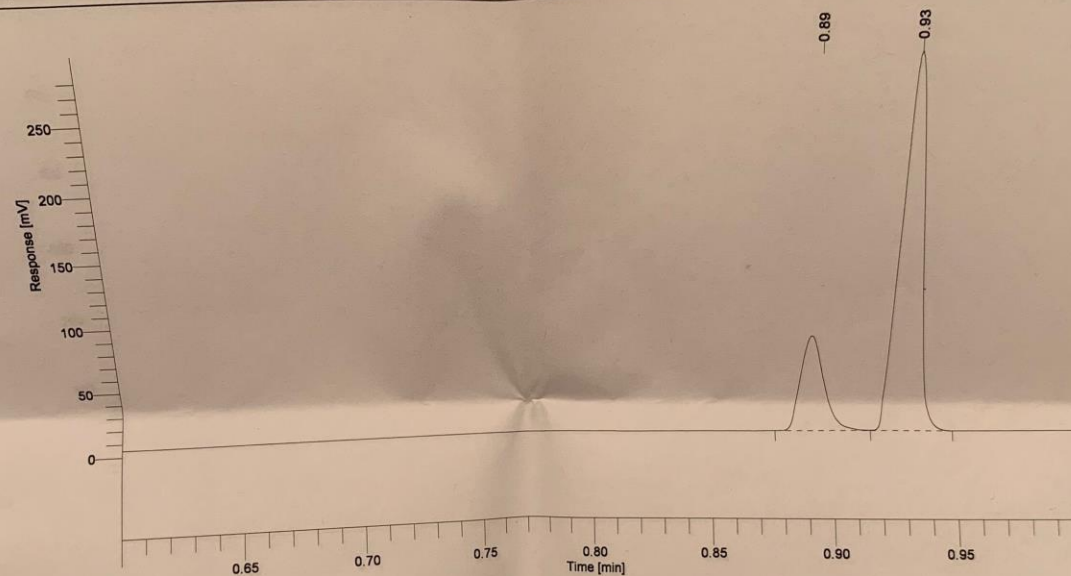
Peak #	Time [min]	Area [uV*sec]	Height [uV]	Area [%]
1	0.898	278771	581187	78.95
2	0.935	74349	158917	21.05
		353121	740103	100.00

Software Version : 6.3.2.0646
Reprocess Number : desktop-1f8tc2t: 1025
Sample Name :
Instrument Name : GC
Rack/Vial : 0/0
Sample Amount : 1.000000
Cycle : 3

Date : 9/25/2020 4:07:09 PM

Data Acquisition Time : 9/25/2020 4:05:57 PM
Channel : A
Operator : labuser
Dilution Factor : 1.000000

Result File : C:\TC Data\Data\Fractional Distillation_A_003-20200925-160709.rst
Sequence File : C:\TC Data\Sequences\GC_TMP-20200925-134539.SEQ



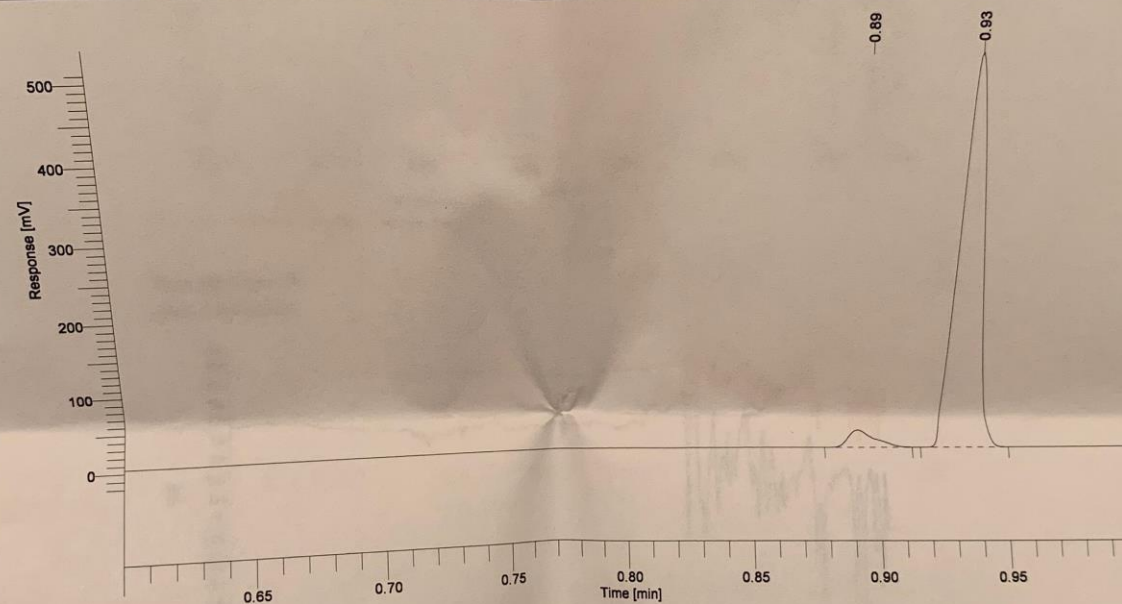
AREA% REPORT

Peak #	Time [min]	Area [uV*sec]	Height [uV]	Area [%]
1	0.892	49583	75331	22.71
2	0.929	168705	281430	77.29
		218287	356761	100.00

Software Version : 6.3.2.0646
Reprocess Number : desktop-1f8tc2t: 1026
Sample Name :
Instrument Name : GC
Rack/Vial : 0/0
Sample Amount : 1.000000
Cycle : 4

Date : 9/25/2020 4:11:29 PM
Data Acquisition Time : 9/25/2020 4:10:16 PM
Channel : A
Operator : labuser
Dilution Factor : 1.000000

Result File : C:\TC Data\Data\Fractional Distillation_A_004-20200925-161129.rst
Sequence File : C:\TC Data\Sequences\GC_TMP-20200925-134539.SEQ



AREA% REPORT

Peak #	Time [min]	Area [uV*sec]	Height [uV]	Area [%]
1	0.893	16765	23147	5.00
2	0.933	318778	513768	95.00
		335543	536915	100.00