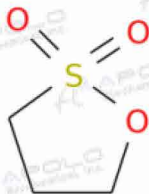


CERTIFICATE OF ANALYSIS

Product Name: 1,3-Propane Sultone

Chemical Structure:



Lot Number: ASP213853501

CAT Number: APL-CCPH-1120714

CAS Registry Number: 1120-71-4

Manufacture Date: 07/2021

Expiry Date: 07/2024

Molecular Formula: C₃H₆O₃S

Molecular Weight: 122.1400

Storage: RT

Analysis Data

Item	Specification	Results
Appearance	colorless and transparent liquid	Conforms
HNMR	Consistent with the structure	Conforms
Purity	≥ 99 %	99 %

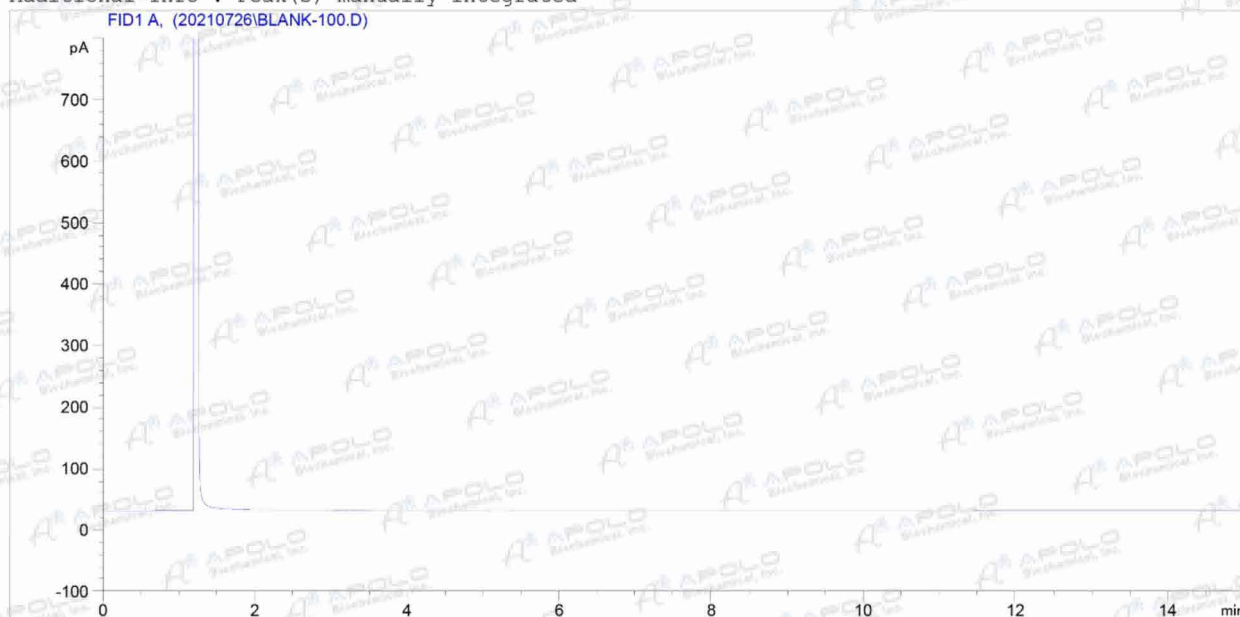
The foregoing is a copy of the Certificate of Analysis as provided by our supplier

Jennifer LaBrecque 08/2021
Quality Assurance Manager

Conclusion: The above product meets the specifications of APOLO

Data File C:\CHEM32_100\1\DATA\20210726\BLANK-100.D
Sample Name: BLANK-100

```
=====
Acq. Operator   :
Acq. Instrument : Instrument 1          Location : -
Injection Date  : 7/26/2021 12:28:18 PM Inj : 1
                                           Inj Volume : Manually
Acq. Method     : C:\CHEM32_100\1\METHODS\NORMAL-ACN.M
Last changed    : 7/26/2021 12:22:56 PM
Analysis Method : C:\CHEM32_100\1\METHODS\NORMAL-ACN-H.M
Last changed    : 7/26/2021 1:22:11 PM
                  (modified after loading)
Additional Info : Peak(s) manually integrated
=====
```



=====
Area Percent Report
=====

```
Sorted By      : Signal
Multiplier:    : 1.0000
Dilution:      : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

No peaks found
```

=====
*** End of Report ***
=====

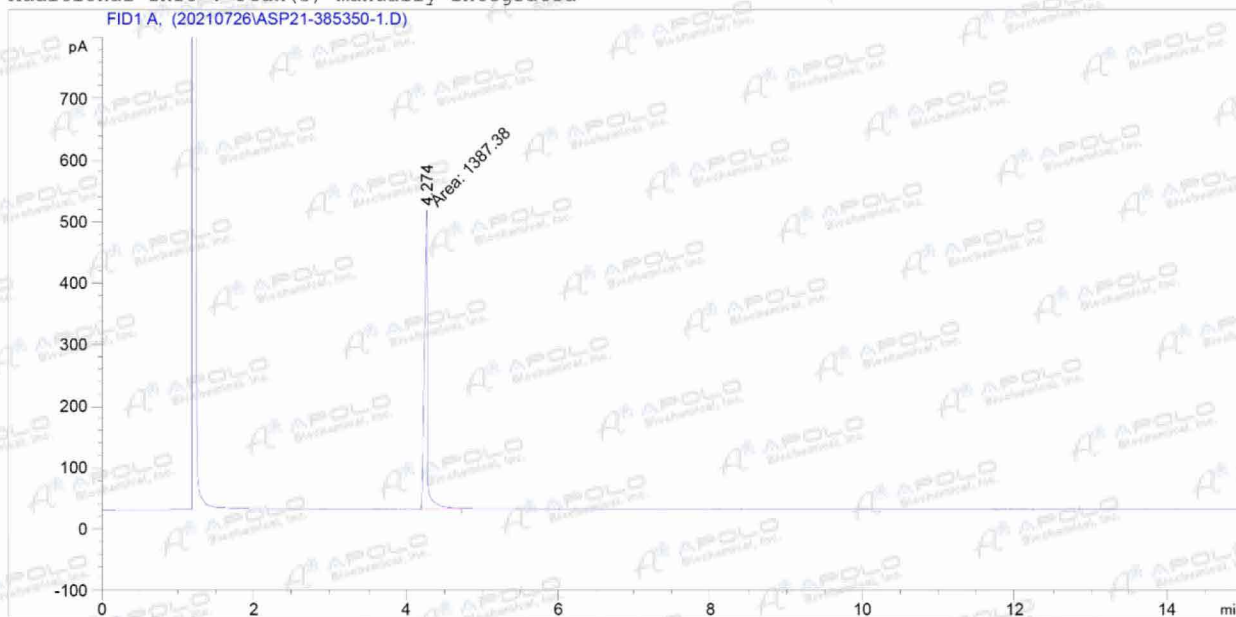
Data File C:\CHEM32_100\1\DATA\20210726\ASP21-385350-1.D
Sample Name: ASP21-385350-1

=====

Acq. Operator :
Acq. Instrument : Instrument 1 Location :
Injection Date : 7/26/2021 12:07:55 PM Inj : 1
Inj Volume : Manually

Acq. Method : C:\CHEM32_100\1\METHODS\NORMAL-ACN.M
Last changed : 7/19/2021 5:33:16 PM
Analysis Method : C:\CHEM32_100\1\METHODS\NORMAL-ACN-H.M
Last changed : 7/26/2021 1:22:11 PM
(modified after loading)

Additional Info : Peak(s) manually integrated



Area Percent Report

Sorted By : Signal
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

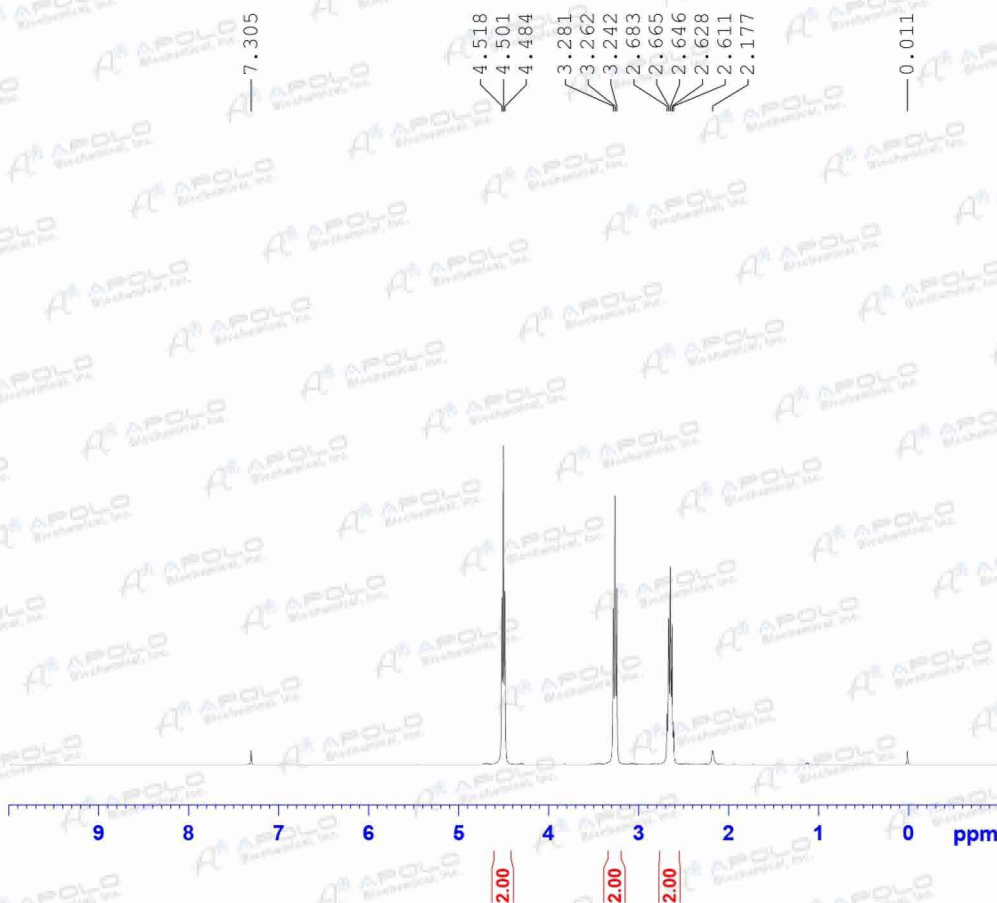
Signal 1: FID1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Height [pA]	Area %
1	4.274	MM	0.0476	1387.37830	486.27811	1.000e2

Totals : 1387.37830 486.27811

*** End of Report ***

ASP21-385350-1 HNMR in CDC13

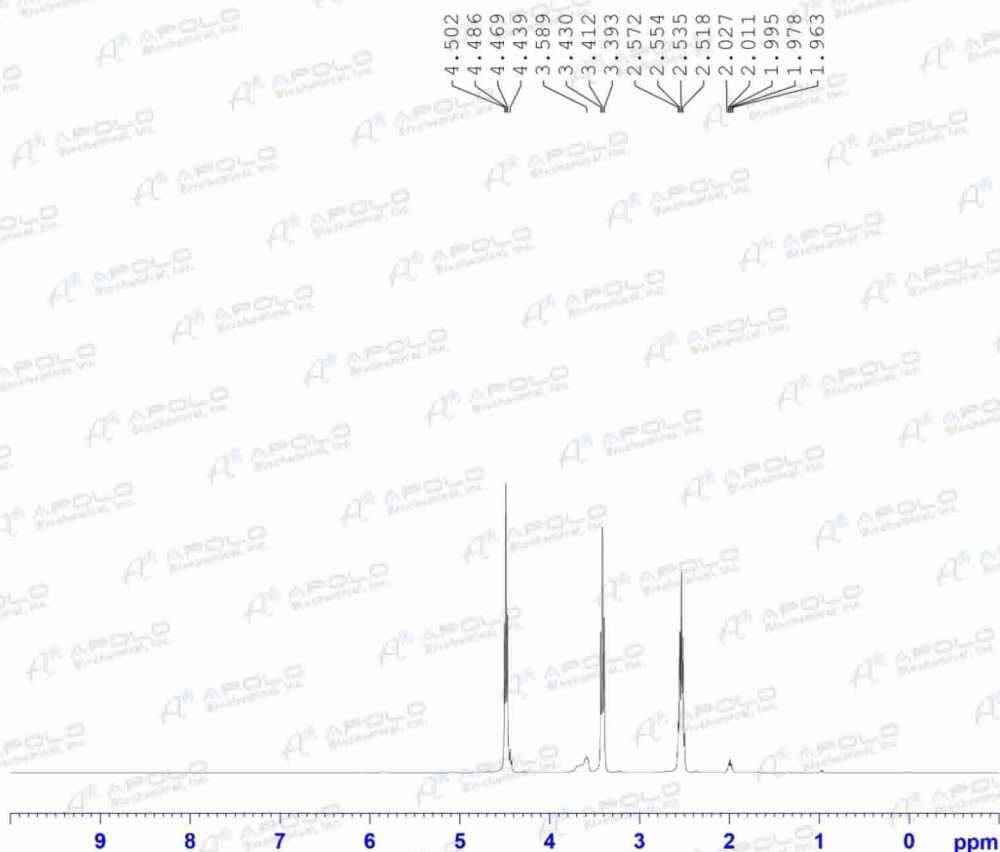


Current Data Parameters
NAME ASP21-385350-1
EXPNO 3
PROCNO 1

F2 - Acquisition Parameters
Date 20210727
Time 11.02
INSTRUM WNMN-1-400MHz
PULPROG zgpg30
TD 38860
SOLVENT CDCl3
NS 32
DS 0
SWH 9715.024 Hz
AQ 1.9999950 sec
RG 48.1
DW 51.467 usec
DE 30.00 usec
TE 293.9 K
NUC1 1H
PL1 120.0 dB
SFO1 399.8316015 MHz

F2 - Processing parameters
SI 131072
SF 399.8277207 MHz
WDW EM
SSB 0
LB 0.50 Hz
GB 0.1
PC 1.00

ASP21-385350-1 HNMR in DMSO



Current Data Parameters
NAME ASP21-385350-1
EXPNO 14
PROCNO 1

F2 - Acquisition Parameters
Date_ 20210726
Time_ 12.11
INSTRUM WNMRI-400MHz
PULPROG zgpg30
TD 38860
SOLVENT DMSO
NS 32
DS 0
SWH 9715.024 Hz
AQ 1.9999950 sec
RG 43.9
DW 51.467 usec
DE 30.00 usec
TE 295.0 K
NUC1 1H
PL1 120.00 dB
SFO1 399.8316015 MHz

F2 - Processing parameters
SI 131072
SF 399.8296199 MHz
WDW EM
SSB 0
LB 0.50 Hz
GB 0.1
PC 1.00