PureSynth
Research Chemicals

Certificate of Analysis

Methanesulfonic acid

PurCert Standard

Product Number	PSR37825	**CAS No.**	75-75-2
Brand	PureSynth	**Lot No.**	HDGG0
Molecular Formula	H_4CO_3S	**Date of Mfg.**	Mar.2022
Molecular Weight	96.11 g/mol	**Date of Exp.**	Feb.2026

Test	Specification	Result
Description	Colorless to yellowish liquid	Colorless liquid
Assay (HPLC)	≥ 99.0 %	99.39 %
Water (By KF)	NMT 1.0 %	0.5510 %
Identification by ^{1}H NMR	Conforms to structure	Conforms
Identification by GC-MS	Conforms to molecular mass	Conforms
Identification by IR	Conforms to structure	Conforms

***Traceable to internal reference standard.**

Storage Condition: Store at ambient temperature and keep container tightly closed in a dry and well-ventilated place.

Remark: The batch complies with the prescribed quality of the above specification.

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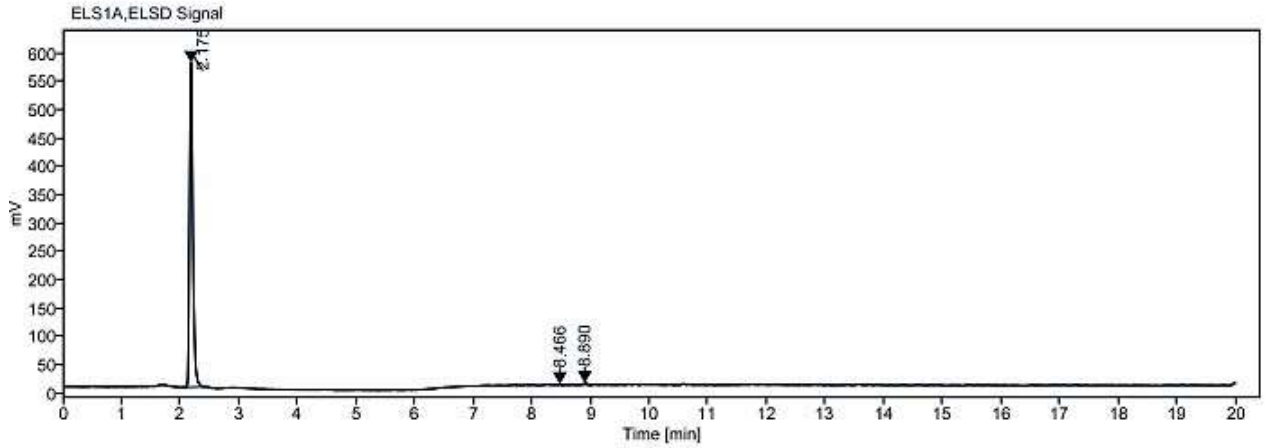
Assay by HPLC - ELSD

Instrument:	DSK-QC-HPLC-002_ELSD	**Location:**	P2-C5
Injection date:	2022-05-06 19:37:57+05:30	**Injection:**	1 of 1
Acq. method:	DSK_HPLC_90_10 20 MIN_1-6 ELSD AQ.amx	**Injection volume:**	2.000
Analysis method:	*HPLC Processing method.pmx		
Last changed:	2022-05-06 13:56:56+05:30	**Acq. operator:**	Analyst



Signal: ELS1A,ELSD Signal

RT [min]	Type	Width [min]	Area	Height	Area%
2.175	MM m	0.0640	2330.3473	572.5629	99.3984
8.466	MM m	0.0373	5.4454	1.9358	0.2323
8.890	MM m	0.0384	8.6578	2.8926	0.3693
		Sum	2344.4505		

Purity: 99.39 %

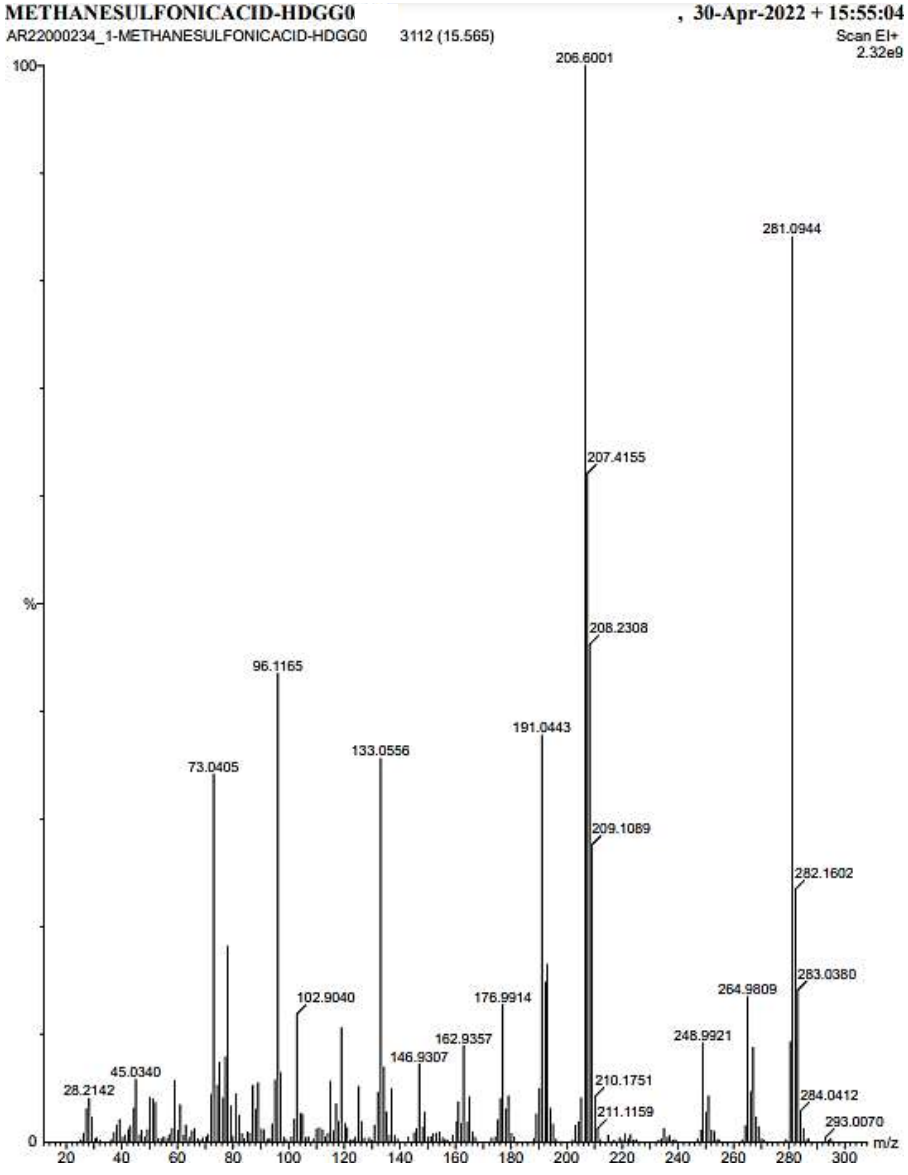
IDENTIFICATION TESTS

GC-MS Spectrum:

METHOD: G.C-MS conditions:
Column: Agilent Technologies, Elite -5MS, 30 m X 0.25 mm, 1.0micron
Instrument: Perkin Elmer, **Carrier gas:** Helium
Source Temp.: 230°C, Transfer line: 250°C
Inlet Temp.: 180°C, **Diluent:** Methanol
Source energy: 70eV

Mass by GC-MS:

Product Name: Methanesulfonic acid
Product Code: PSR37825



Identification by GC-MS: Conforms to molecular mass

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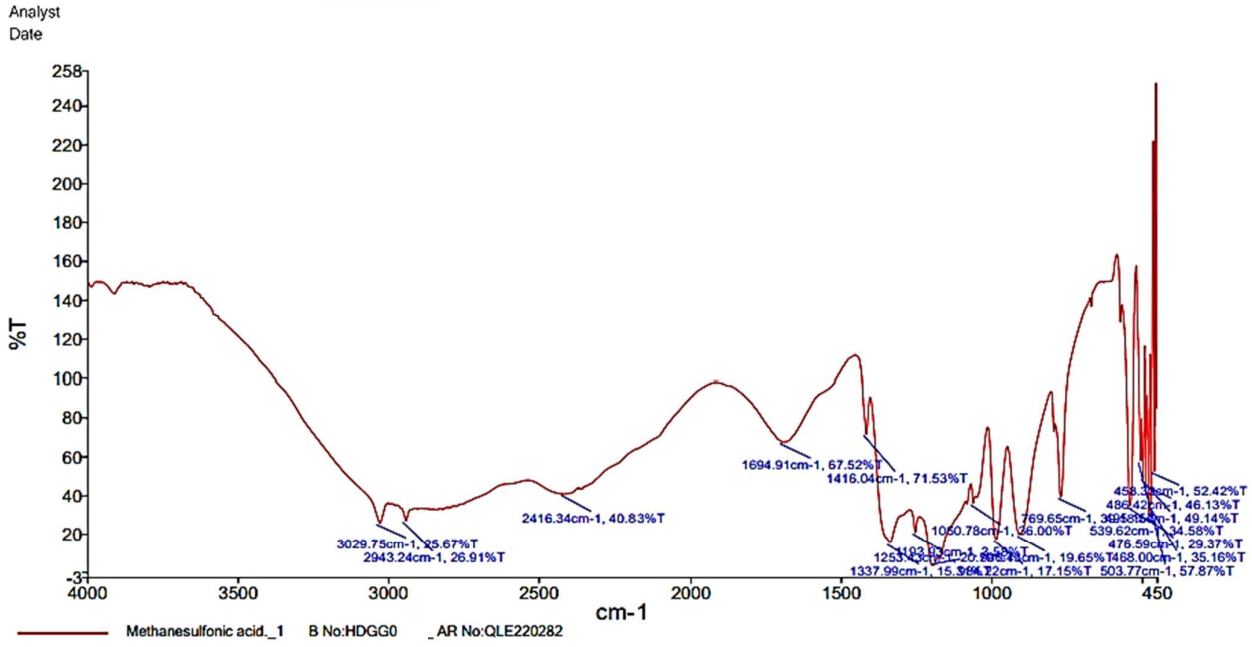
Infrared spectrum:

Product Name: Methanesulfonic acid
Product Code: PSR37825



Source Spectra Results	
Spectrum Name	Number Of Peaks
Methanesulfonic acid._1	20

List of Peak Area/Height		
Peak Number	X (cm-1)	Y (%T)
1	3029.75	25.67
2	2943.24	26.91
3	2416.34	40.83
4	1694.91	67.52
5	1416.04	71.53
6	1337.99	15.31
7	1253.43	20.79
8	1193.93	3.58
9	1060.78	36.00
10	984.22	17.15
11	906.43	19.65
12	769.65	39.18
13	539.62	34.58
14	503.77	57.87
15	495.15	49.14
16	486.42	46.13
17	476.59	29.37
18	468.00	35.16
19	458.33	52.42
20	451.00	87.27

Identification by IR: Conforms to structure

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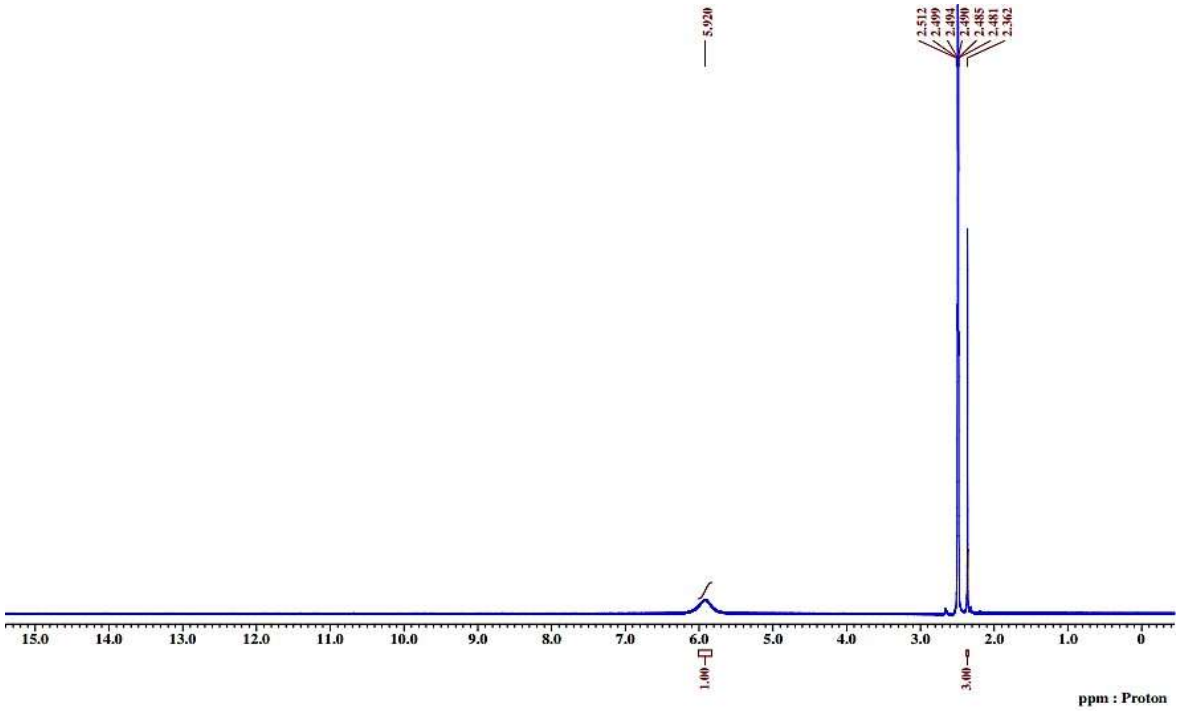
^{1}H NMR Spectrum:

Product Name: Methanesulfonic acid
Product Code: PSR37825



Sample_Id	= Methanesulfonic acid-	Experiment	= proton.jxp	Relaxation_Delay	= 5[s]
Author	= delta	X_Domain	= Proto	Exp_Total	= 205.0[s]
Creation_Time	= 4-MAY-2022 19:56:36	Dim_Title	= Proton		
Revision_Time	= 5-MAY-2022 09:01:33	Solvent	= DMSO-D6		
Experiment Details		Scans	= 32		
Instrument	:JEOL[Delta V5.3.2]	Temp_Get	= 25[dC]		
Spectrometer	= JNM-ECZ400S/L1	X_Acq_Time	= 1.16916224[s]		

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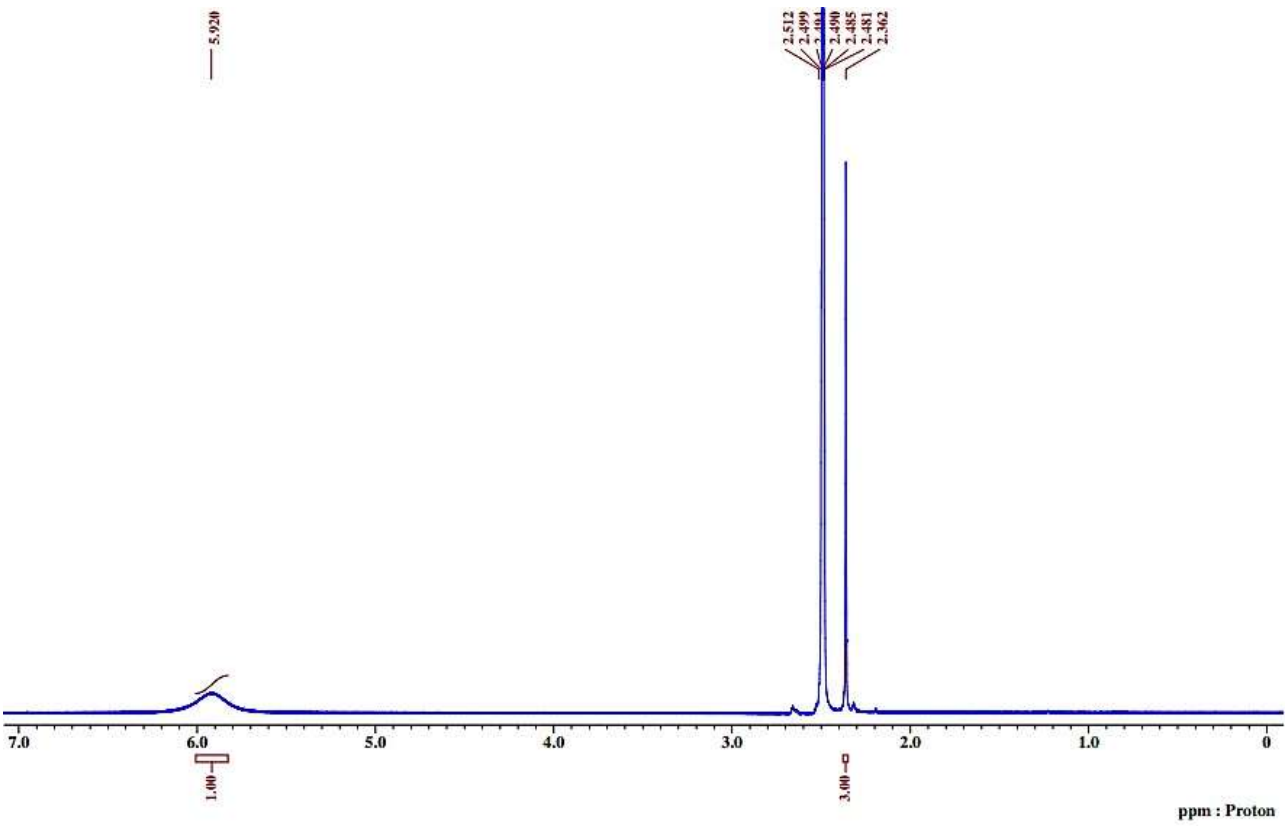
^{1}H NMR Spectrum: Expansion



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Spectrometer	= JNM-ECZ400S/L1	X_Acq_Time	= 1.16916224[s]		

Identification by ^{1}H NMR: Conforms to structure

Maximum limits of impurities

WATER DETERMINATION

Method: Karl Fisher titration

Water Content (PSR37825) = **0.5510 %**

Approved By

Head - Technical