

Certificate of Analysis

Ethyl Methanesulfonate

PurCert Standard for GC

Product Number	PSR37052	CAS No.	62-50-0
Brand	PureSynth	Lot No.	E37086P
Molecular Formula	C ₃ H ₈ O ₃ S	Date of Mfg.	April,2024
Molecular Weight	124.16 g/mol	Date of Exp.	March,2028

Test	Specification	Result
Description	Colorless-pale yellow liquid	Conforms
Assay (GC-FID)	≥ 99.5 %	99.71 %
Water (By KF)	NMT 0.1 %	0.088 %
Density	1.204-1.206 g/cm ³	1.206 g/cm ³
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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Worldwide Helpline No. 1800-120-1234-34 , Email: info@pure-synth.com , Website: www.pure-synth.com

Assay by GC-FID

METHOD: GC- FID conditions:

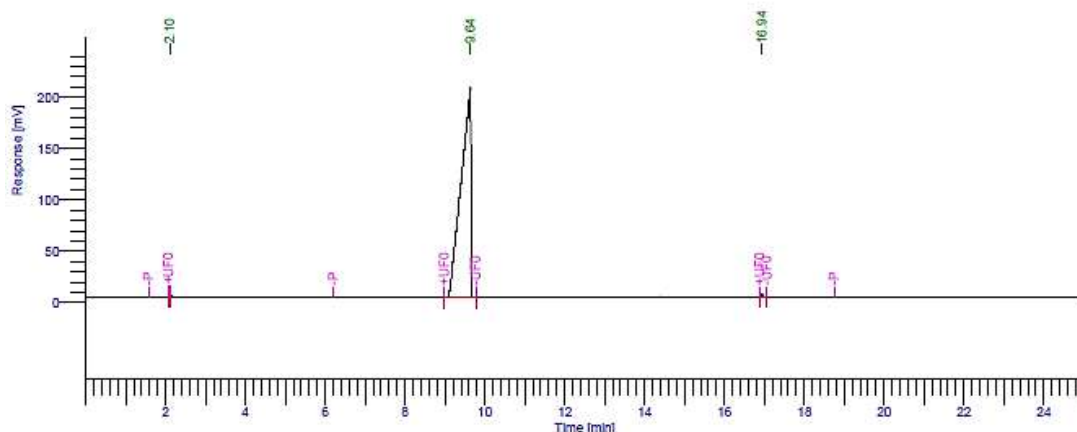
Column: Agilent Technologies DB-FFAP 30mx 0.530mm, 1.0micron

Instrument: PerkinElmer, GC 2014,

Detector: FID, **Carrier gas:** Nitrogen

Temp programming: Initial 50°C hold for 1min, 5° C Ramp/ min., 100 °C hold for 1 min., 25°C Ramp up to 250°C hold for 2 min., Run time 20 min.

Software Version	: 6.3.4.0700	Date	: 04-07-2024 11:55:27
Operator	: manager	Sample Name	: ETHYL METHANESULFONATE-E370
Sample Number	: 001		: 86P
AutoSampler	: BUILT-IN	Study	:
Instrument Name	: Clarus 690	Rack/Vial	: 0/6
Instrument Serial #	: None	Channel	: A
Delay Time	: 0.00 min	A/D mV Range	: 1000
Sampling Rate	: 12.5000 pts/s	End Time	: 25.00 min
Sample Volume	: 1.000000 ul		
Sample Amount	: 1.0000	Area Reject	: 0.000000
Data Acquisition Time	: 04-07-2024 10:26:29	Dilution Factor	: 1.00
		Cycle	: 1



GC Reports

Peak #	Component Name	Time [min]	Area [uV*sec]	Height [uV]	Area [%]
1		2.096	2768.16	1579.99	0.08
2		9.640	3383994.05	204781.99	99.71
3		16.940	6943.60	3774.69	0.20
			3393705.82	210136.67	100.00

Missing Component Report
Component Expected Retention (Calibration File)

All components were found

Purity by GC-FID: 99.71 %

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IDENTIFICATION TESTS

GC-MS Spectrum:

METHOD: GC-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:

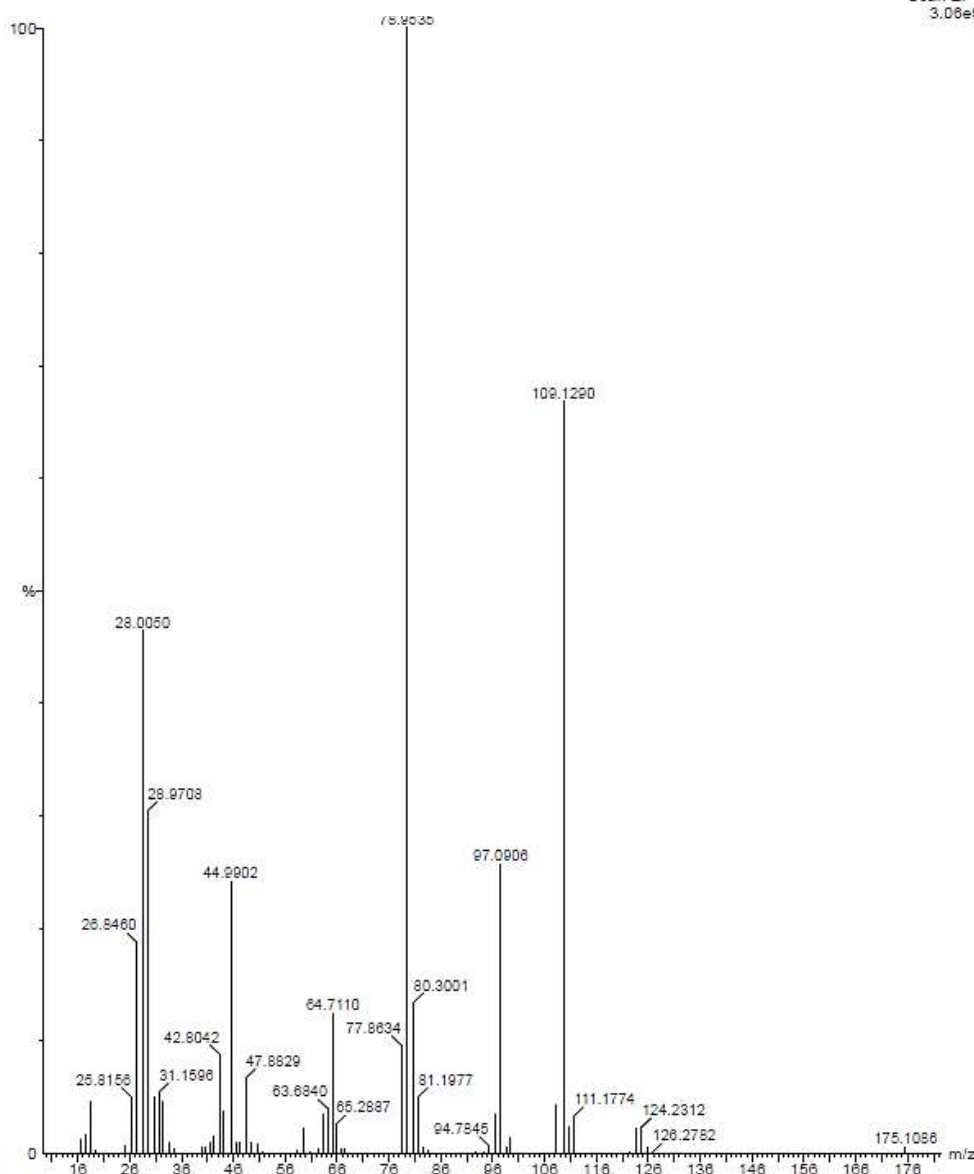
Product Name: Ethyl Methanesulfonate

Product Code: PSR37052

ETHYL METHANESULFONATE-E37086P

, 04-Jul-2024 + 10:43:58

Scan EI+
3.08e9



Identification by GC-MS: Conforms to molecular mass

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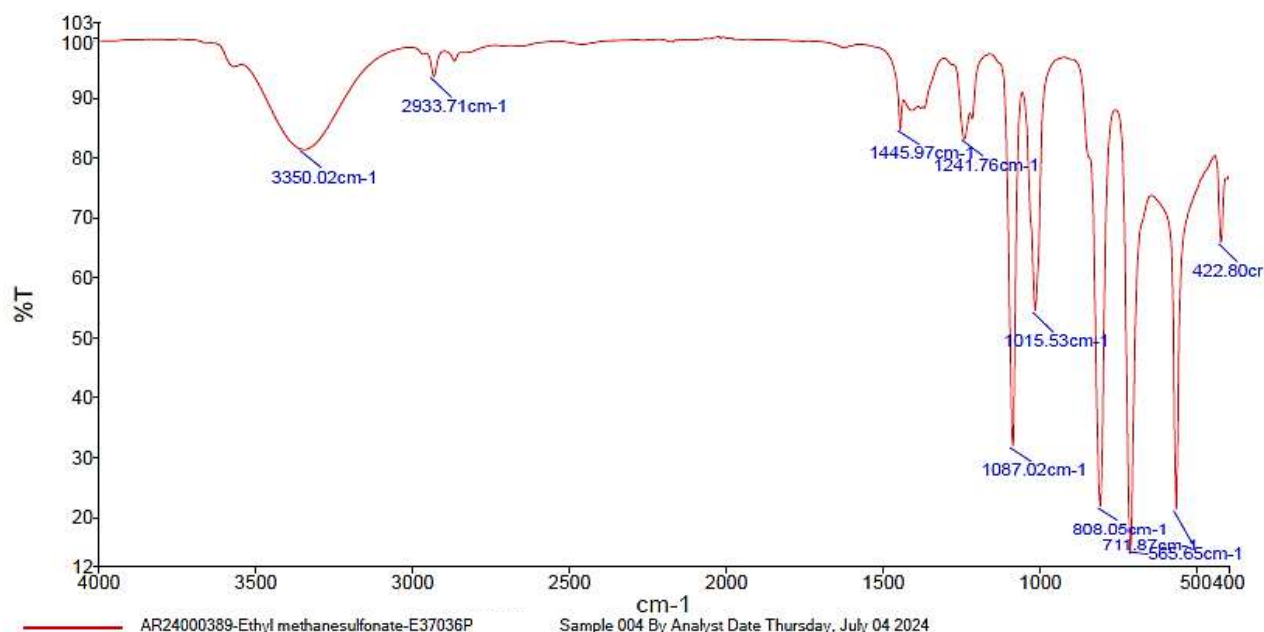
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Infrared spectrum:

Product Name: Ethyl Methanesulfonate

Product Code: PSR37052

Analyst
Date



Source Spectra Results		
Spectrum Name		Number Of Peaks
AR24000389-Ethyl methanesulfonate-E37036P		10
List of Peak Area/Height		
Peak Number	X (cm-1)	Y (%T)
1	3350.02	81.53
2	2933.71	93.70
3	1445.97	84.84
4	1241.76	83.28
5	1087.02	31.91
6	1015.53	54.56
7	808.05	21.83
8	711.87	13.95
9	565.65	21.37
10	422.80	65.97

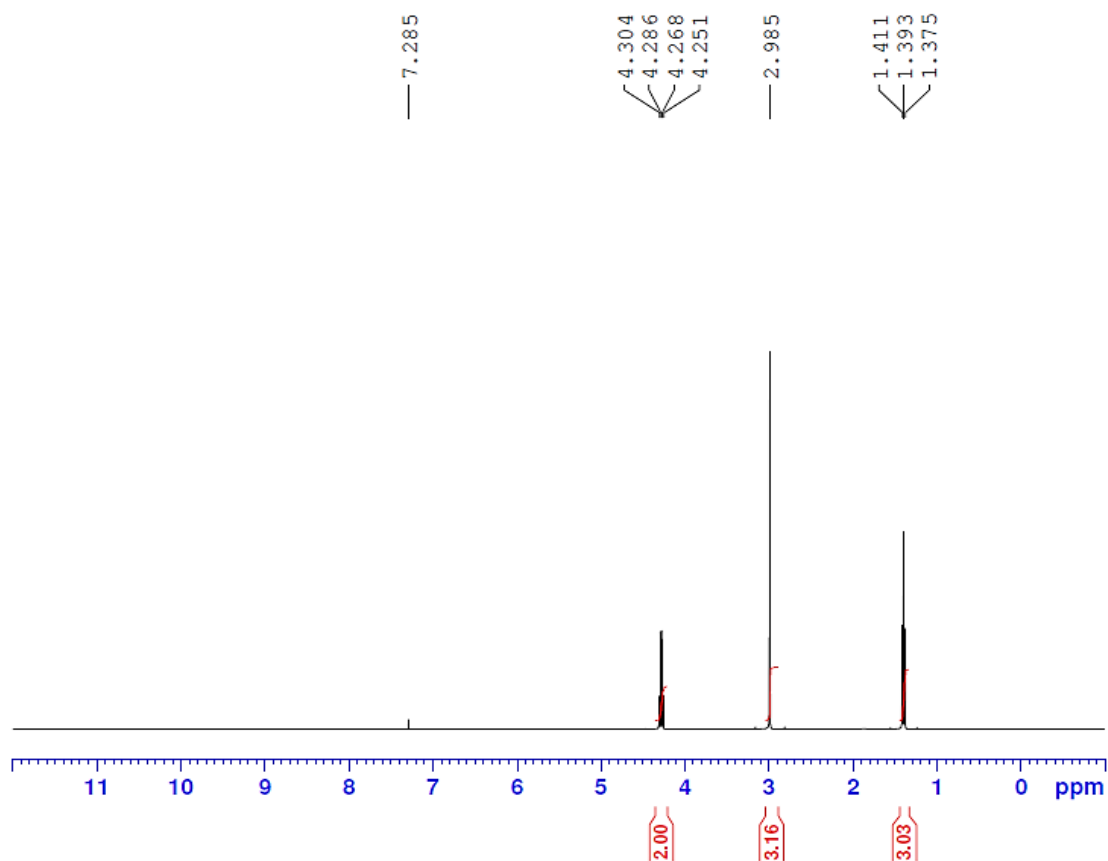
Identification by IR: Conforms to structure

¹H NMR Spectrum:

Product Name: Ethyl Methanesulfonate

Product Code: PSR37052

Ethyl methanesulfonate
B.NO-E37086P
1H NMR In CDCL3



Identification by ¹H NMR: Conforms to structure

Maximum limits of impurities

WATER DETERMINATION

Method: Karl Fisher titration

Water Content (PSR37052) = **0.088 %**

Approved By
Head - Technical

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