

Certificate of Analysis

Methyl p-Toluenesulfonate

PurCert Standard for GC

Product Number	PSR38517	CAS No.	80-48-8
Brand	PureSynth	Lot No.	M38517T0425
Molecular Formula	C ₈ H ₁₀ O ₃ S	Date of Mfg.	April,2025
Molecular Weight	186.23 g/mol	Date of Exp.	March,2030

Test	Specification	Result
Description	Colorless to light yellow liquid	Colorless liquid
Assay (by GC)	≥ 98.5 %	99.99 %
Water (by KF)	NMT 0.2 %	0.193 %
Density	1.234 – 1.236 g/cm ³	1.234 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 a temperature of 2-8°C and keep container tightly closed in a dry and well-Ventilated place.

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

Assay by GC-FID

METHOD: GC- FID conditions:

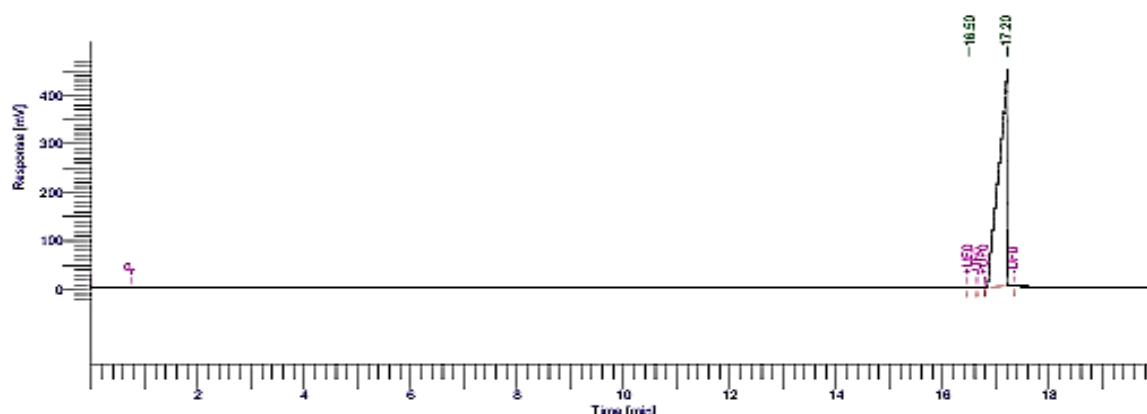
Column: Agilent Technologies DB-FFAP 30mx 0.530mm, 1.0micron

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	: 13-05-2025 15:56:11
Operator	: manager	Sample Name	: METHYL P-TOLUENESULFONATE-M
Sample Number	: 001		38517T0425
AutoSampler	: BUILT-IN	Study	:
Instrument Name	: Clarus 690	Rack/Vial	: 0/63
Instrument Serial #	: None	Channel	: A
Delay Time	: 0.00 min	A/D mV Range	: 1000
Sampling Rate	: 12.5000 pts/s	End Time	: 20.00 min
Sample Volume	: 1.000000 ul		
Sample Amount	: 1.0000	Area Reject	: 0.000000
Data Acquisition Time	: 13-05-2025 12:32:52	Dilution Factor	: 1.00
		Cycle	: 1



GC Reports

Peak #	Component Name	Time [min]	Area [uV*sec]	Height [uV]	Area [%]
1		16.504	555.15	124.56	0.01
2		17.204	4792078.42	444962.38	99.99
			4792633.57	445086.93	100.00

Missing Component Report
Component Expected Retention (Calibration File)

All components were found

Purity by GC-FID: 99.99%

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:

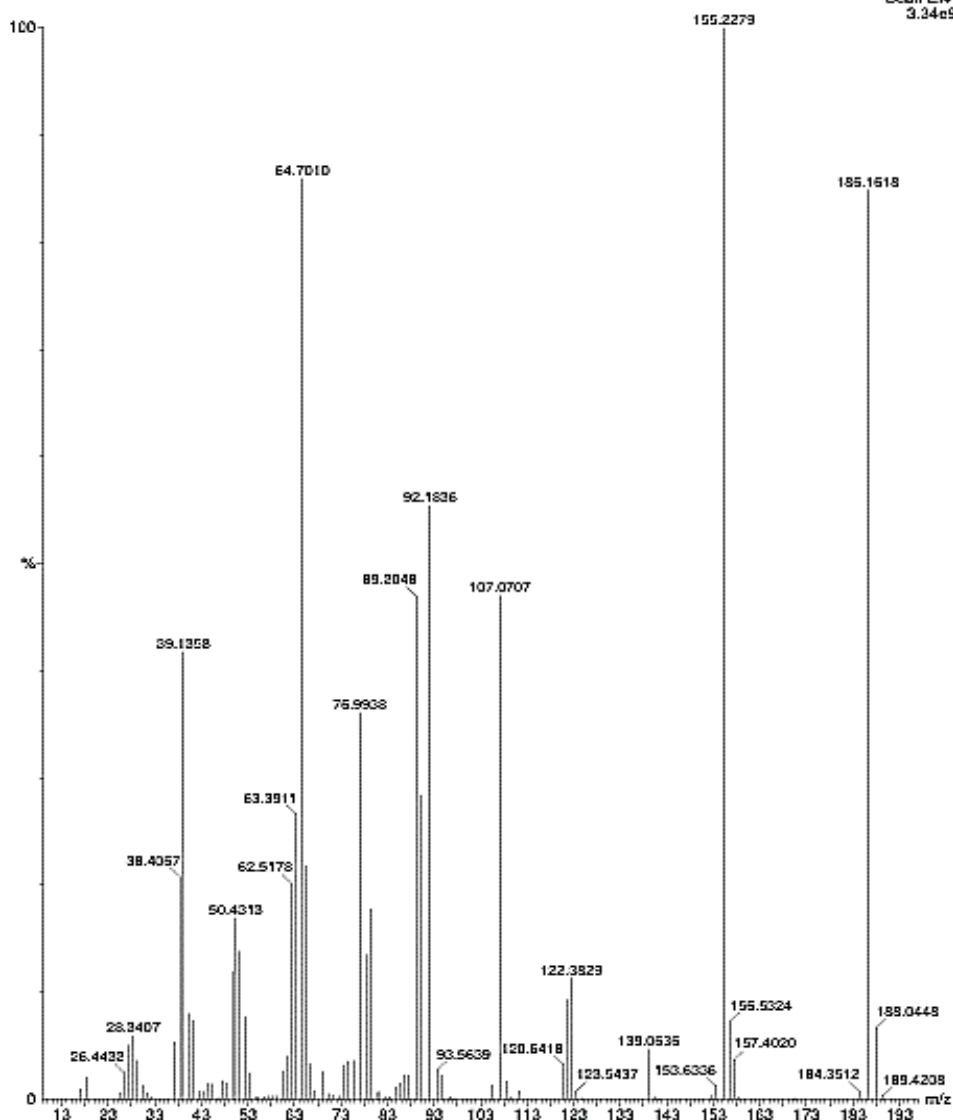
Product Name: Methyl p-Toluenesulfonate

Product Code: PSR38517

METHYL P-TOLUENESULFONATR-M3851T0425

, 13-May-2025 + 14:25:18

Scan E1+
3.34e9



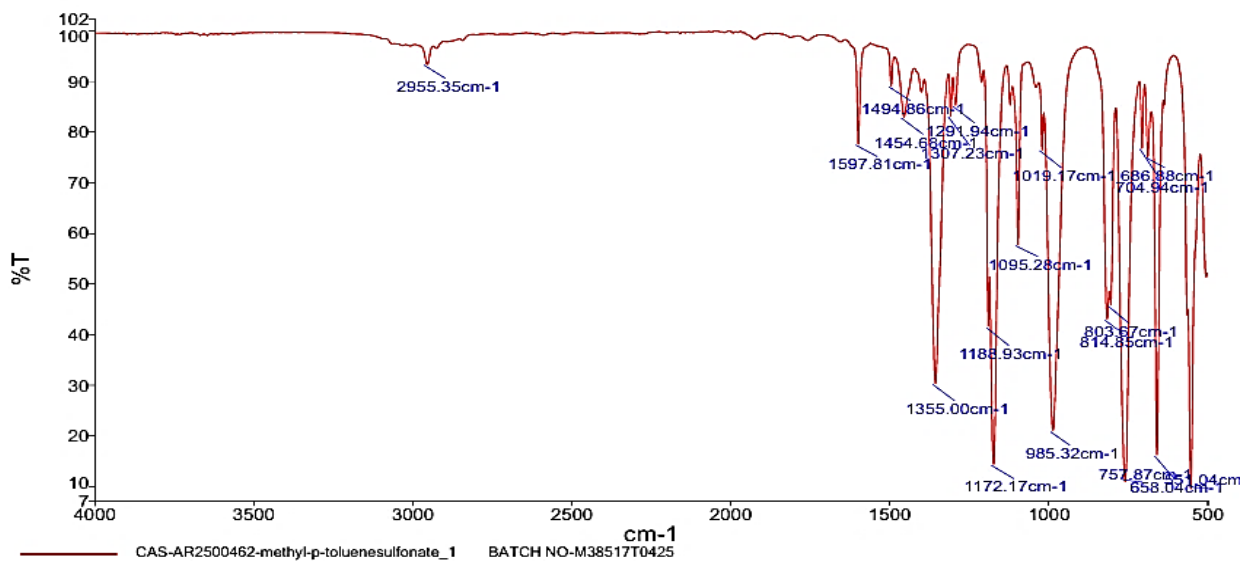
Identification by GC-MS: Conforms to molecular mass

Infrared spectrum:

Product Name: Methyl p-Toluenesulfonate

Product Code: PSR38517

Analyst
Date



Source Spectra Results		
Spectrum Name	Number Of Peaks	
CAS-AR2500462-methyl-p-toluenesulfonate_1	28	
List of Peak Area/Height		
Peak Number	X (cm-1)	Y (%T)
1	2955.35	93.48
2	1923.61	98.48
3	1757.54	98.23
4	1597.81	77.72
5	1494.86	89.24
6	1454.68	83.04
7	1399.22	88.01
8	1355.00	30.38
9	1307.23	83.29
10	1291.94	85.38
11	1210.04	89.93
12	1188.93	41.67
13	1172.17	14.40
14	1120.28	85.45
15	1095.28	57.81
16	1038.99	88.92
17	1019.17	76.56
18	985.32	21.06
19	914.85	43.11
20	803.67	45.89
21	757.87	10.93
22	704.94	76.91
23	686.88	75.25
24	658.04	16.24
25	634.93	85.48
26	562.75	43.87
27	551.04	9.48
28	502.81	51.43

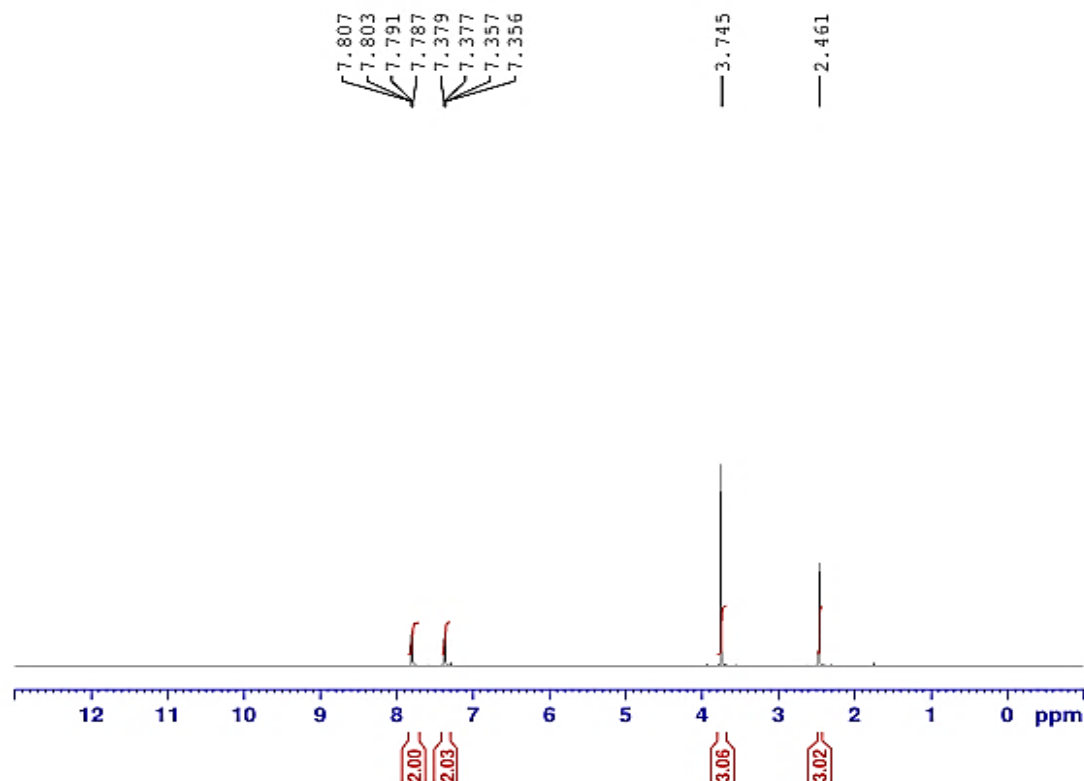
Identification by IR: Conforms to structure

¹H NMR Spectrum:

Product Name: Methyl p-Toluenesulfonate

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Methyl p-Toluenesulfonate
B.No: M38517T0425
1H-NMR in CDCL₃



Identification by ¹H NMR: Conforms to structure

Maximum limits of impurities

WATER DETERMINATION

Method: Karl Fisher titration

Water Content (**PSR38517**) = 0.193 %

Approved By
Head - Technical

This is a computer-generated report - does not require sign