

Certificate of Analysis

o-Toluenesulfonic

PurCert

Product Number	PSR45416	CAS No.	88-20-0
Brand	PureSynth	Lot No.	T45416B0525
Molecular Formula	C ₇ H ₈ O ₃ S	Date of Mfg.	May, 2025
Molecular Weight	172.2 g/mol	Date of Exp.	April, 2030

Test	Specification	Result
Description	Pale-yellow Solid	Pale-yellow Solid
Assay (by HPLC)	≥ 99.0 %	99.87 %
Water (by KF)	NMT 0.500 %	0.461 %
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

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.

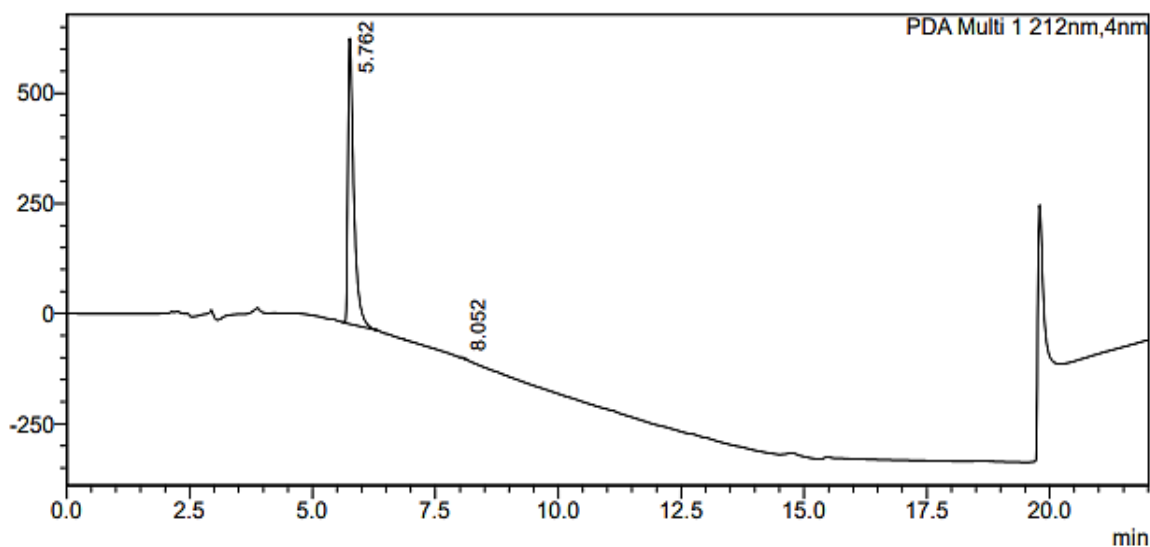
Assay by HPLC

<Sample Information>

Sample Name : O-TOLUENESULFONIC ACID-T45416B0525
Data Filename : CAS-AR2500810-O-TOLUENESULFONIC ACID-T45416B0525.lcd
Method Filename : shimpack-AA90-ACN-10-1.lcm
Vial # : 3-20
Injection Volume : 10 uL
Date Acquired : 6/17/2025 1:30:58 PM
Date Processed : 6/17/2025 3:12:33 PM

<Chromatogram>

mAU



<Peak Table>

PDA Ch1 212nm

Peak#	Ret. Time	Area	Height	Area%
1	5.762	5354539	648214	99.872
2	8.052	6885	1905	0.128
Total		5361424	650119	100.000

Purity by HPLC: 99.87 %

IDENTIFICATION TESTS

MS Spectrum:

Mass by MS:

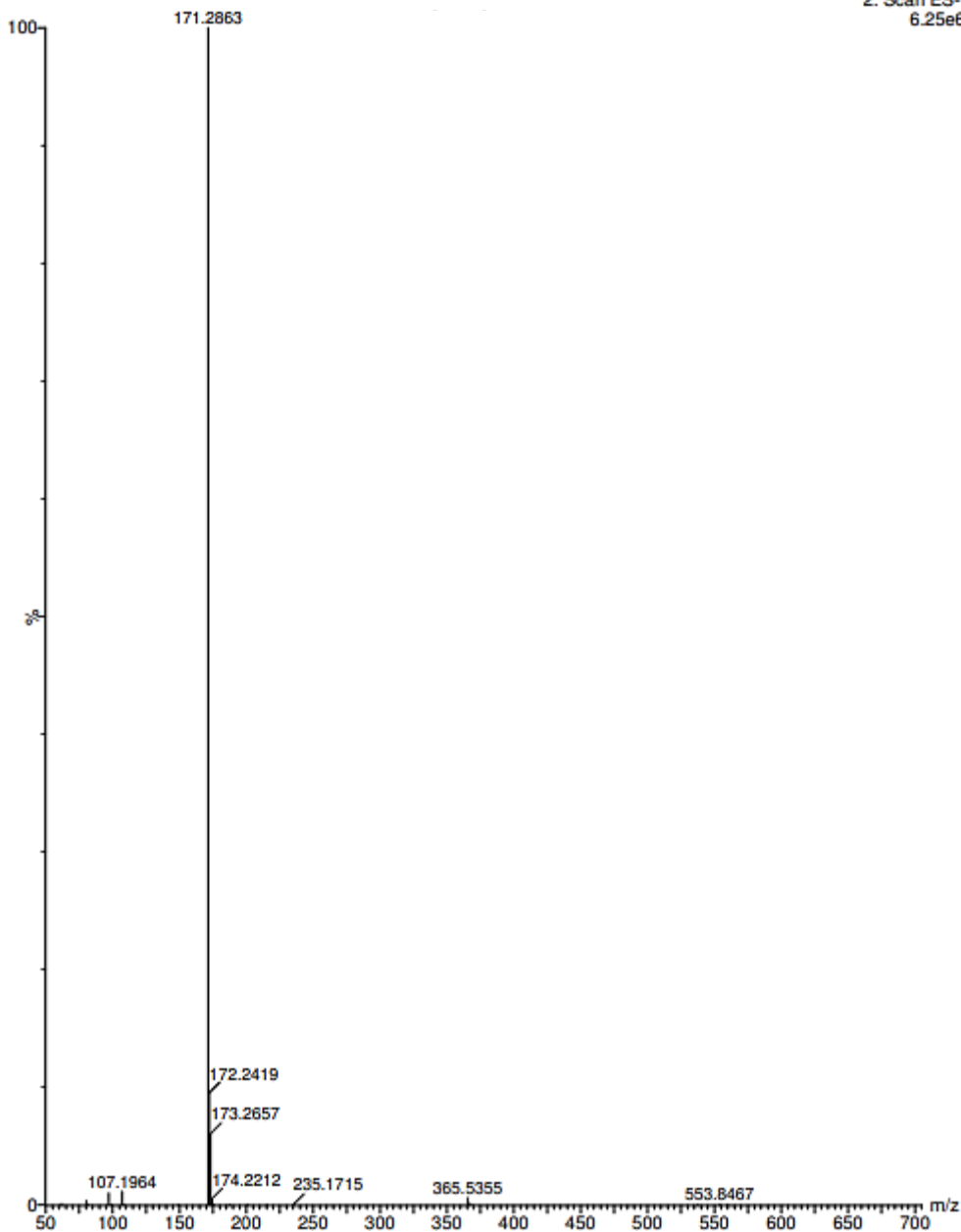
Product Name: o-Toluenesulfonic

Product Code: PSR45416

O-TOLUENE SULFONIC ACID

16-Jun-2025 16:54:54

2: Scan ES-
6.25e6



Identification by GC-MS: Conforms to molecular mass

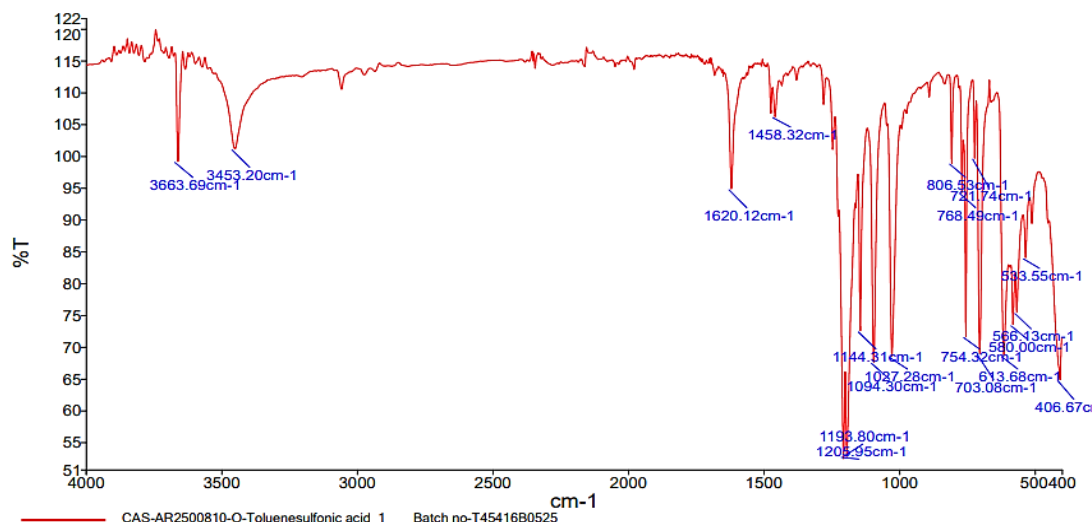
Infrared spectrum:

Product Name: o-Toluenesulfonic

Product Code: PSR45416

Analyst
Date

Analyst
17 June 2025 12:33



Source Spectra Results		
Spectrum Name		Number Of Peaks
CAS-AR2500810-O-Toluenesulfonic acid_1		43
List of Peak Area/Height		
Peak Number	X (cm-1)	Y (%T)
1	3890.33	116.02
2	3843.29	116.35
3	3826.24	116.27
4	3807.23	115.92
5	3786.66	114.96
6	3696.19	115.57
7	3663.69	99.25
8	3637.04	113.79
9	3574.00	114.14
10	3453.20	101.24
11	3059.72	110.62
12	2352.01	115.07
13	2345.01	113.94
14	2161.44	114.19
15	2049.32	114.21
16	1979.33	113.76
17	1682.43	112.80
18	1620.12	94.95
19	1474.36	106.86
20	1458.32	106.31
21	1379.77	112.08
22	1279.41	108.26
23	1245.86	101.14
24	1225.83	90.56
25	1205.95	52.42
26	1193.80	52.78
27	1144.31	72.60
28	1094.30	67.65
29	1027.28	68.56
30	889.45	109.40
31	832.32	111.47
32	806.53	98.98
33	768.49	94.35
34	754.32	71.70
35	721.74	99.76
36	703.08	68.93
37	661.43	108.59
38	613.68	68.67
39	580.00	73.56
40	566.13	75.50
41	533.55	84.10
42	510.51	89.48
43	406.67	64.88

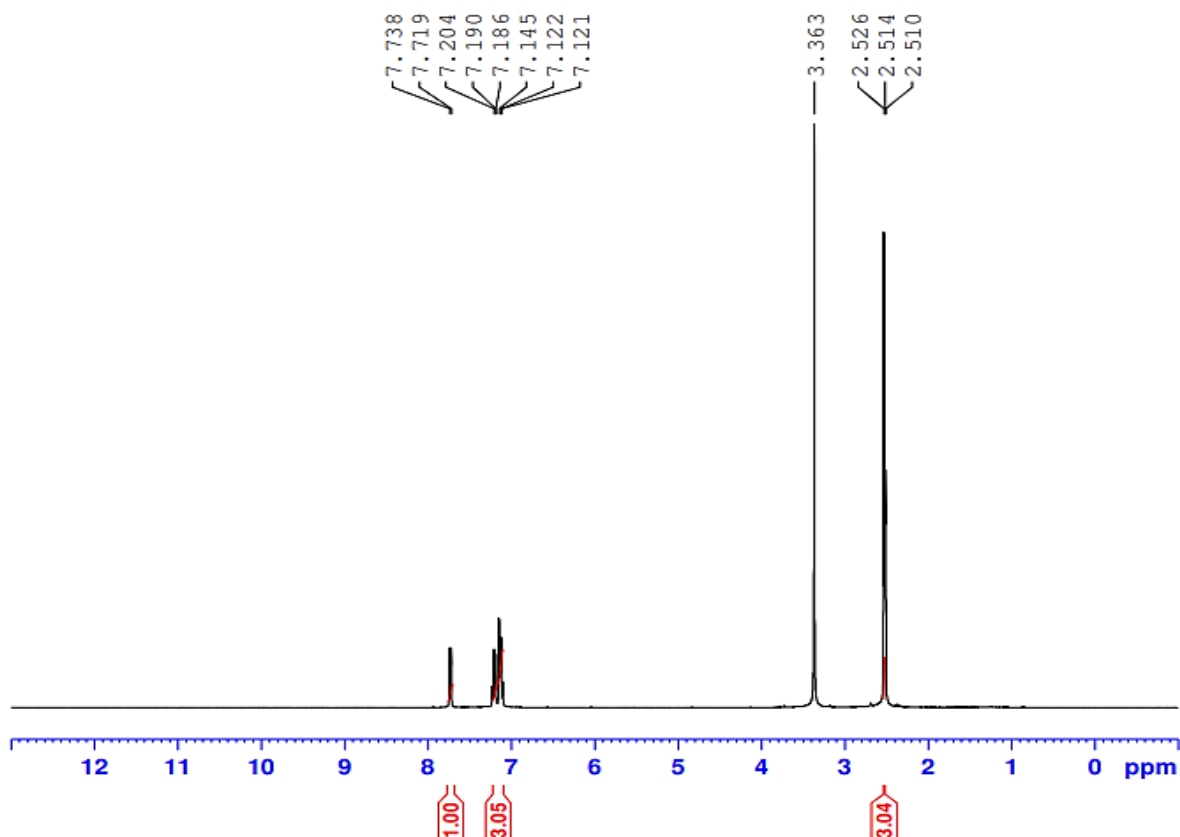
Identification by IR: Conforms to structure

¹H NMR Spectrum:

Product Name: o-Toluenesulfonic

Product Code: PSR45416

o-toluenesulfonic acid
B.No-T45416B0525
1H-NMR in DMSO



Identification by ¹H NMR: Conforms to structure

Maximum limits of impurities

WATER DETERMINATION

Method: Karl Fisher titration

Water Content (PSR45416) = 0.461 %

Approved By
Head - Technical

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