

Certificate of Analysis

Ethyl p-Toluenesulfonate

PurCert Standard for GC

Product Number	PSR41269	CAS No.	80-40-0
Brand	PureSynth	Lot No.	E41269B11023
Molecular Formula	C ₉ H ₁₂ O ₃ S	Date of Mfg.	October.2023
Molecular Weight	200.25 g/mol	Date of Exp.	September.2027

Test	Specification	Result
Description	Yellow Solid	Yellow Solid
Assay (GC-FID)	≥ 99.0 %	99.07 %
Water (By KF)	NMT 0.5000 %	0.3932 %
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 room temperature and keep the container tightly closed.

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:

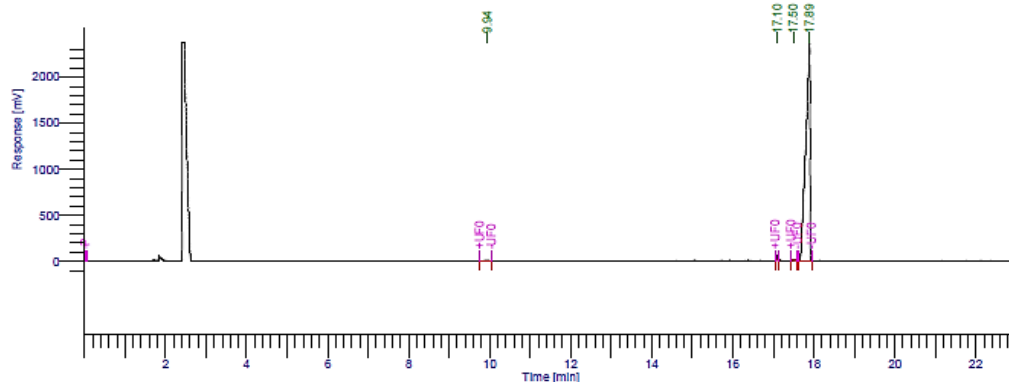
Column: Agilent Technologies DB-FFAP 30mx 0.530mm, 1.0micron

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	: 23-12-2023 17:21:42
Operator	: manager	Sample Name	: ETHYL P-TOLUENESULFONATE-E41
Sample Number	: 001		269B11023
AutoSampler	: BUILT-IN	Study	:
Instrument Name	: Clarus 690	Rack/Vial	: 0/12
Instrument Serial #	: 690S23050206	Channel	: A
Delay Time	: 0.00 min	A/D mV Range	: 1000
Sampling Rate	: 12.5000 pts/s	End Time	: 23.00 min
Sample Volume	: 1.000000 ul	Area Reject	: 0.000000
Sample Amount	: 1.0000	Dilution Factor	: 1.00
Data Acquisition Time	: 23-12-2023 16:44:56	Cycle	: 1



GC Reports

Peak #	Component Name	Time [min]	Area [uV*sec]	Height [uV]	Area [%]
1		9.938	28259.57	4813.26	0.17
2		17.099	107020.51	55914.41	0.64
3		17.497	20296.44	5043.97	0.12
4		17.893	16595492.98	2.35e+06	99.07
			16751069.51	2.41e+06	100.00

Warning -- Signal level out-of-range in peak

Missing Component Report
Component Expected Retention (Calibration File)

All components were found

Purity by GC-FID: 99.07 %

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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:

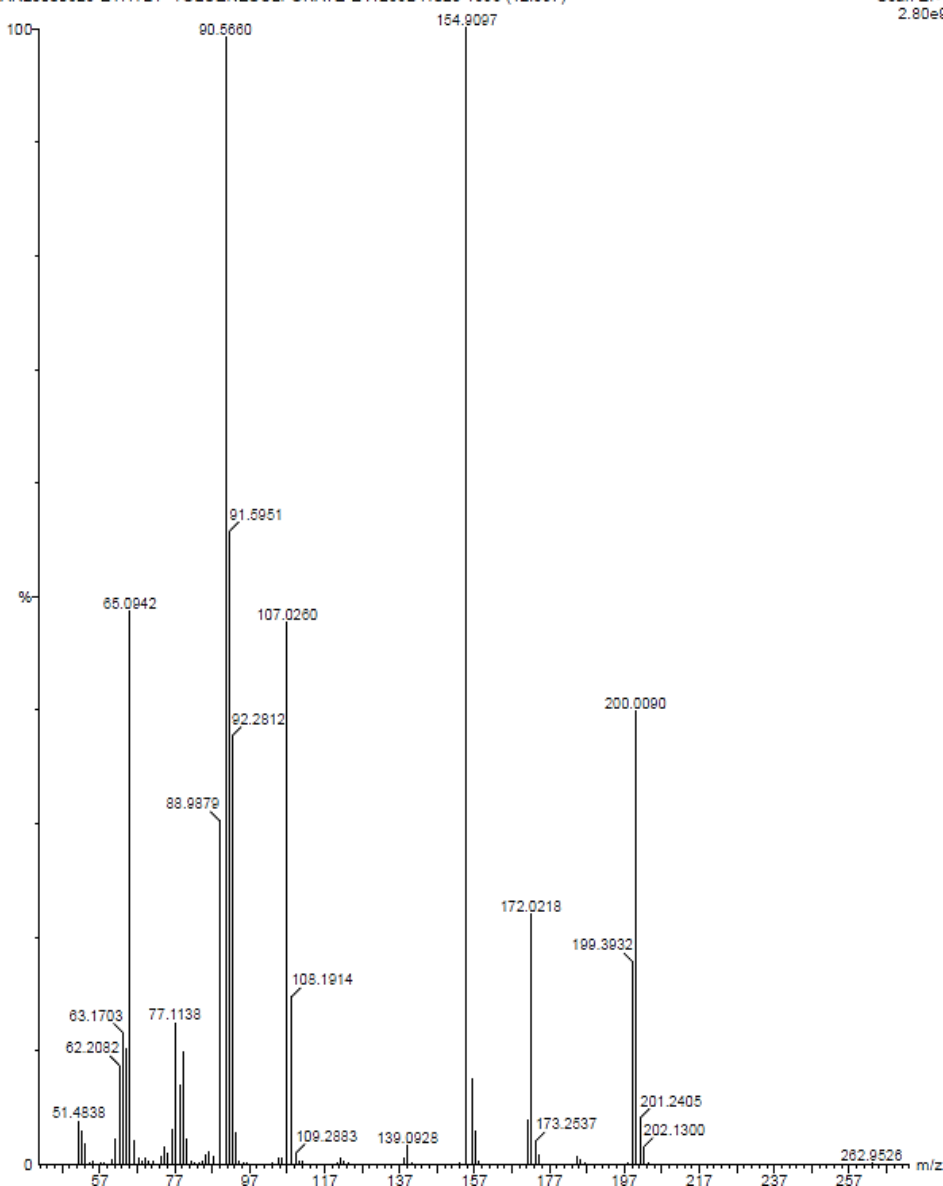
Product Name: Ethyl p-Toluenesulfonate

Product Code: PSR41269

, 22-Dec-2023 + 13:15:41

AR23000829-ETHYL P-TOLUENESULFONATE-E41269B11023 1999 (12.997)

Scan EI+
2.80e4



Identification by GC-MS: Conforms to molecular mass

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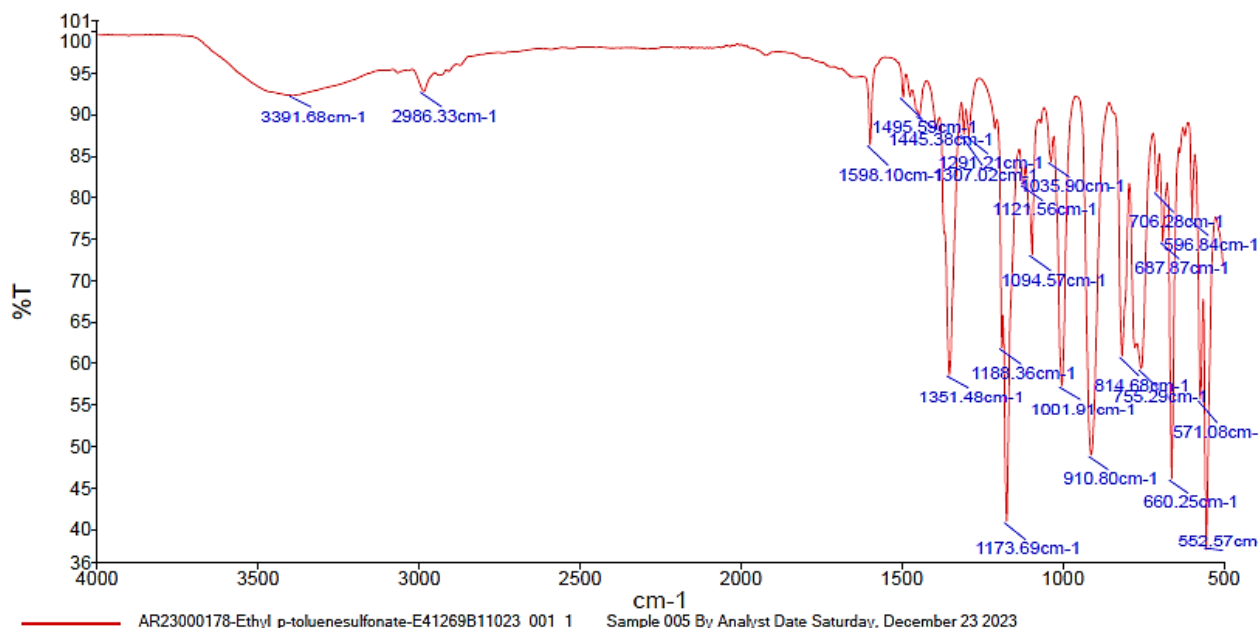
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Infrared spectrum:

Product Name: Ethyl p-Toluenesulfonate

Product Code: PSR41269

Analyst
Date



Source Spectra Results		
Spectrum Name	Number Of Peaks	
AR23000178-Ethyl p-toluenesulfonate-E41269B11023_001_1	23	
List of Peak Area/Height		
Peak Number	X (cm-1)	Y (%T)
1	3391.68	92.43
2	2986.33	92.88
3	1598.10	86.45
4	1495.59	92.18
5	1445.38	89.96
6	1351.48	58.65
7	1307.02	87.72
8	1291.21	87.57
9	1188.36	61.94
10	1173.69	40.97
11	1121.56	81.64
12	1094.57	73.19
13	1035.90	84.40
14	1001.91	57.32
15	910.80	48.97
16	814.68	60.92
17	755.29	59.39
18	706.28	80.76
19	687.87	74.77
20	660.25	46.11
21	596.84	77.42
22	571.08	55.66
23	552.57	37.50

Identification by IR: Conforms to structure

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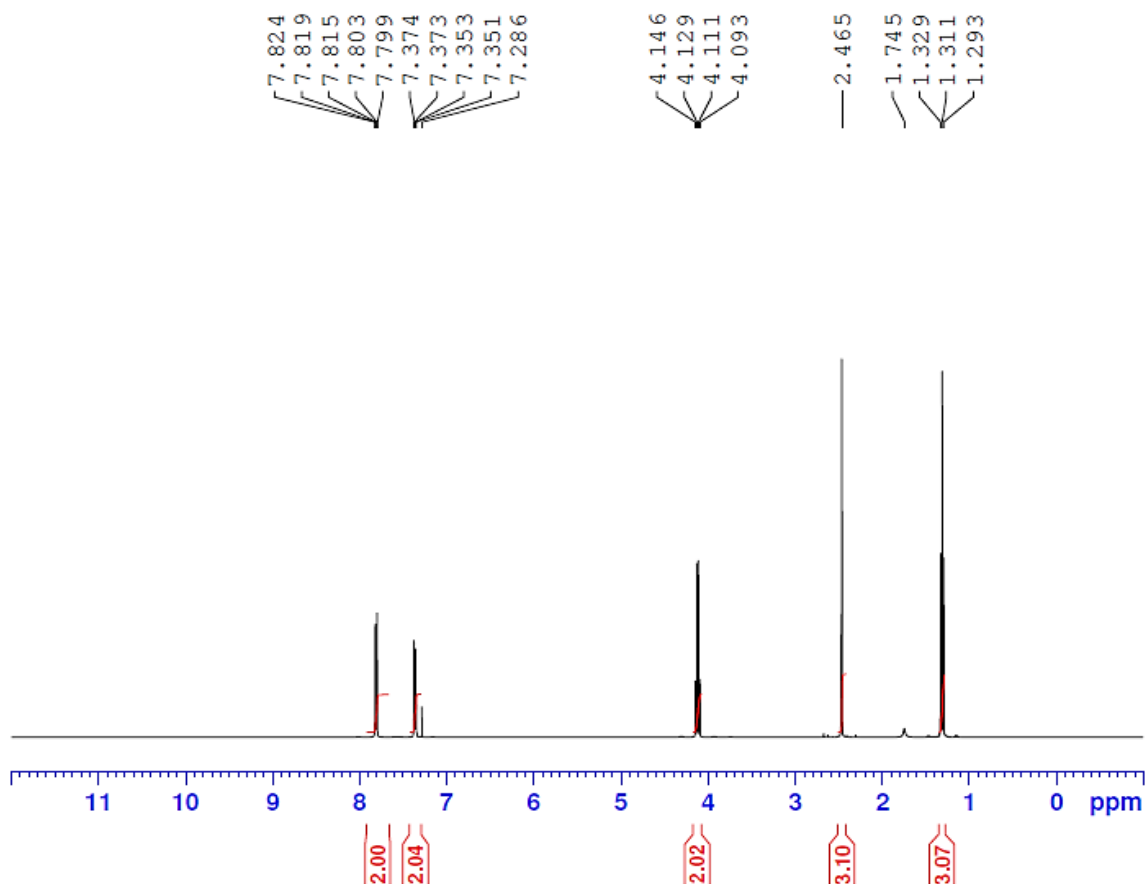
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¹H NMR Spectrum:

Product Name: Ethyl p-Toluenesulfonate

Product Code: PSR41269

Ethyl p-Toluenesulfonate
B.NO-E41269B11023
1H-NMR in CDCl₃



Identification by ¹H NMR: Conforms to structure

Maximum limits of impurities

WATER DETERMINATION

Method: Karl Fisher titration

Water Content (PSR41269) = **0.3932 %**

Approved By
Head - Technical

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