

Certificate of Analysis

Thymol

PurCert Standard for GC

(Secondary Reference Standard)

Product Number	PSR42479	CAS No.	89-83-8
Brand	PureSynth	Lot No.	T42479T1023
Molecular Formula	C ₁₀ H ₁₄ O	Date of Mfg.	Oct.2023
Molecular Weight	150.22 g/mol	Date of Exp.	Sep.2027

Test	Specification	Result
Description	White crystals	White crystals
Assay (GC-FID)	≥ 99.5 %	99.88 %
Water (By KF)	NMT 0.2000 %	0.1815 %
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 USP Reference Standard 1667213 Lot no: R135E0**

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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Assay by GC-FID

METHOD: GC- FID conditions:

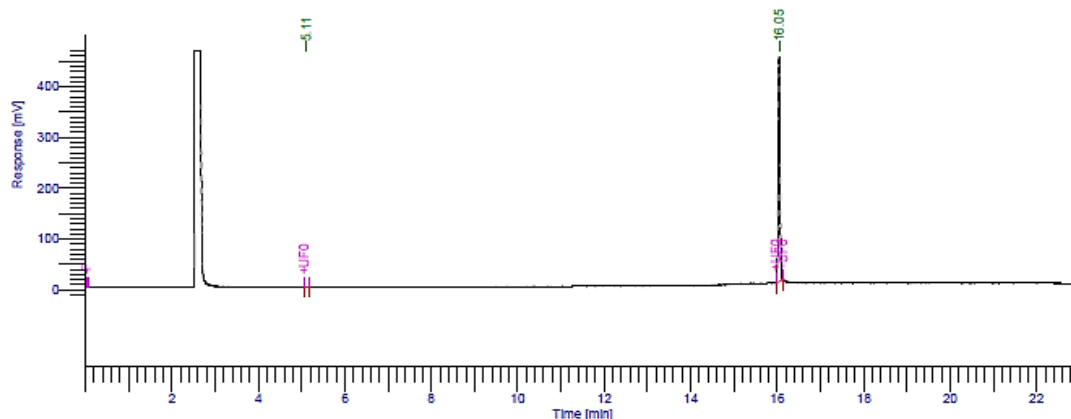
Column: Agilent Technologies DB-FFAP 30mx 0.530mm, 1.0micron

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	: 27-12-2023 17:17:52
Operator	: manager	Sample Name	: THYMOL-T42479T1023
Sample Number	: 001	Study	:
AutoSampler	: BUILT-IN	Rack/Vial	: 0/22
Instrument Name	: Clarus 690	Channel	: A
Instrument Serial #	: 690S23050206	A/D mV Range	: 1000
Delay Time	: 0.00 min	End Time	: 23.00 min
Sampling Rate	: 12.5000 pts/s	Area Reject	: 0.000000
Sample Volume	: 1.000000 ul	Dilution Factor	: 1.00
Sample Amount	: 1.0000	Cycle	: 1
Data Acquisition Time	: 27-12-2023 16:44:42		



GC Reports

Peak #	Component Name	Time [min]	Area [uV*sec]	Height [uV]	Area [%]
1		5.112	1528.47	551.80	0.12
2		16.045	1281083.09	442613.05	99.88
			1282611.55	443164.85	100.00

Missing Component Report

Component Expected Retention (Calibration File)

All components were found

Purity by GC-FID: 99.88 %

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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:

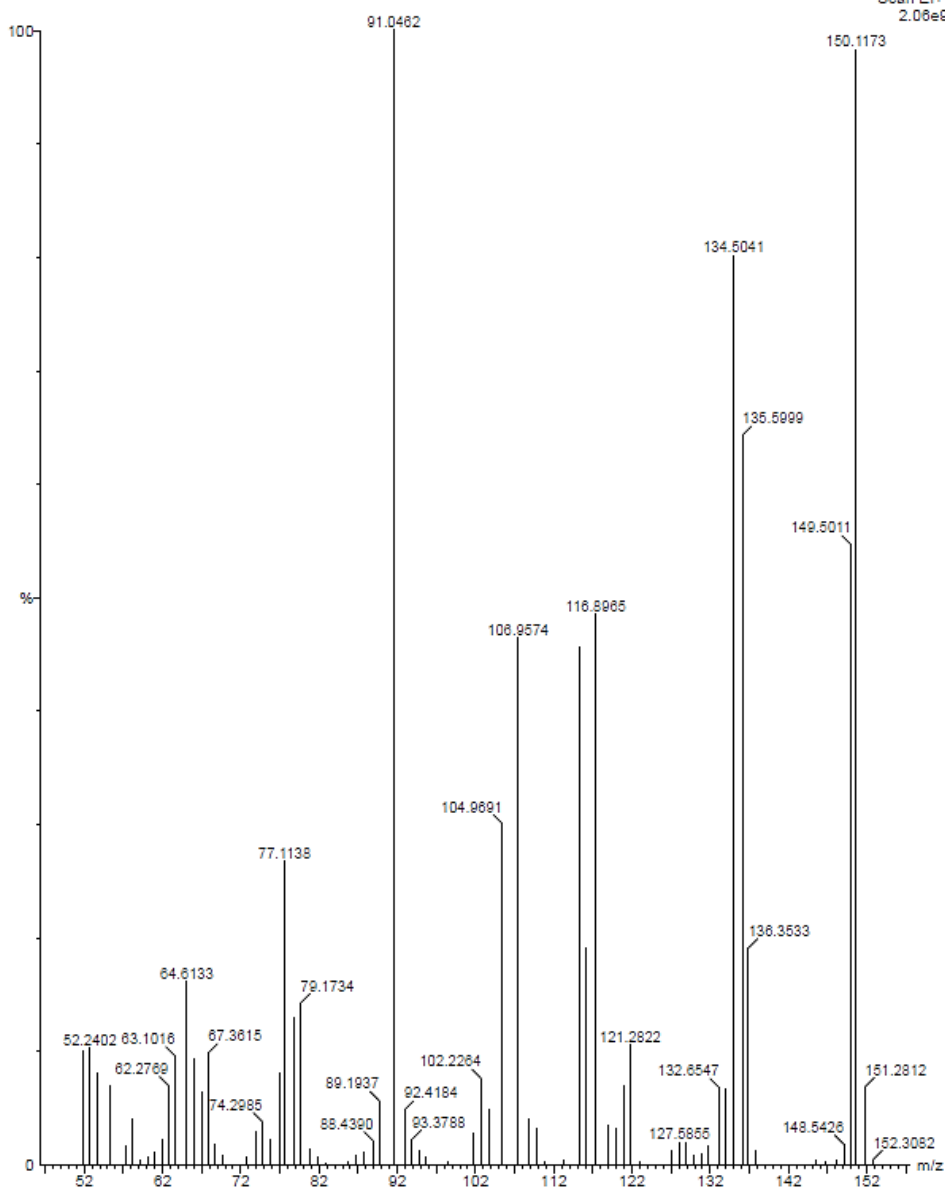
Product Name: Thymol

Product Code: PSR42479

THYMOL-T42479T1023

, 27-Dec-2023 + 14:48:32

Scan EI+
2.08e9



Identification by GC-MS: Conforms to molecular mass

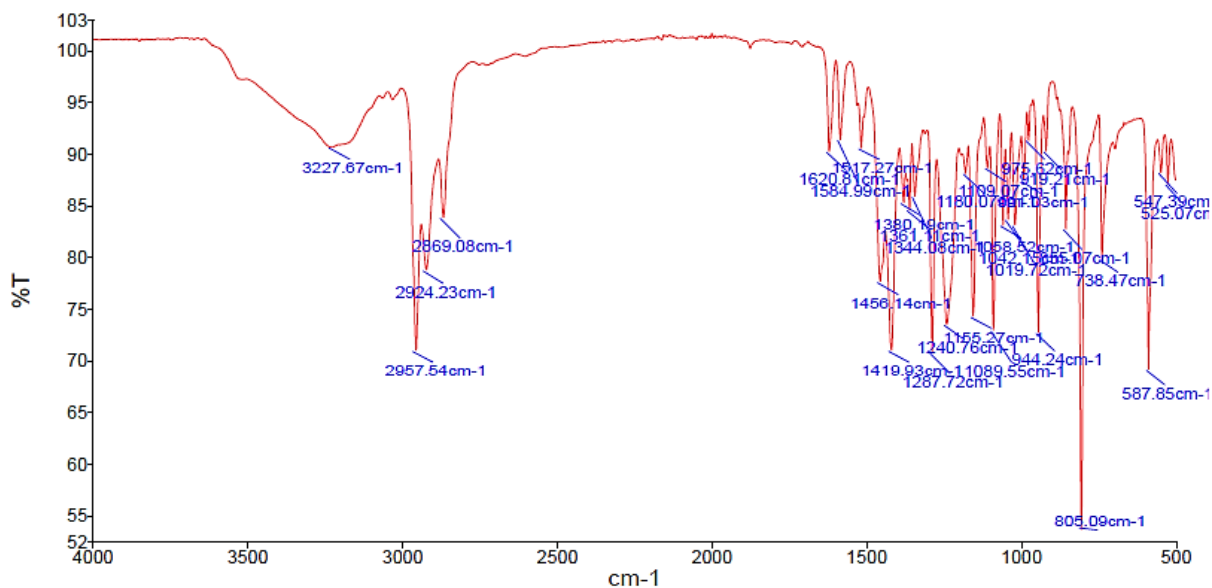
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Infrared spectrum:

Product Name: Thymol
Product Code: PSR42479

Analyst
Date



AR23000183-THYMOL-T42479T1023_1 Sample 004 By Analyst Date Wednesday, December 27 2023

Source Spectra Results		
Spectrum Name	Number Of Peaks	
AR23000183-THYMOL-T42479T1023_1	31	
List of Peak Area/Height		
Peak Number	X (cm-1)	Y (%T)
1	3227.67	90.75
2	2957.54	71.04
3	2924.23	78.84
4	2869.08	83.92
5	1620.81	90.34
6	1584.99	91.49
7	1517.27	90.66
8	1456.14	77.72
9	1419.93	71.06
10	1380.19	85.34
11	1361.11	84.67
12	1344.08	85.98
13	1287.72	70.92
14	1240.76	73.58
15	1180.07	88.22
16	1155.27	74.35
17	1109.07	88.76
18	1089.55	73.01
19	1058.52	83.18
20	1042.15	83.77
21	1019.72	83.21
22	991.03	87.54
23	975.62	91.42
24	944.24	72.79
25	919.21	90.37
26	855.07	82.82
27	805.09	53.66
28	738.47	79.91
29	587.85	69.22
30	547.39	88.29
31	525.07	87.19

Identification by IR: Conforms to structure

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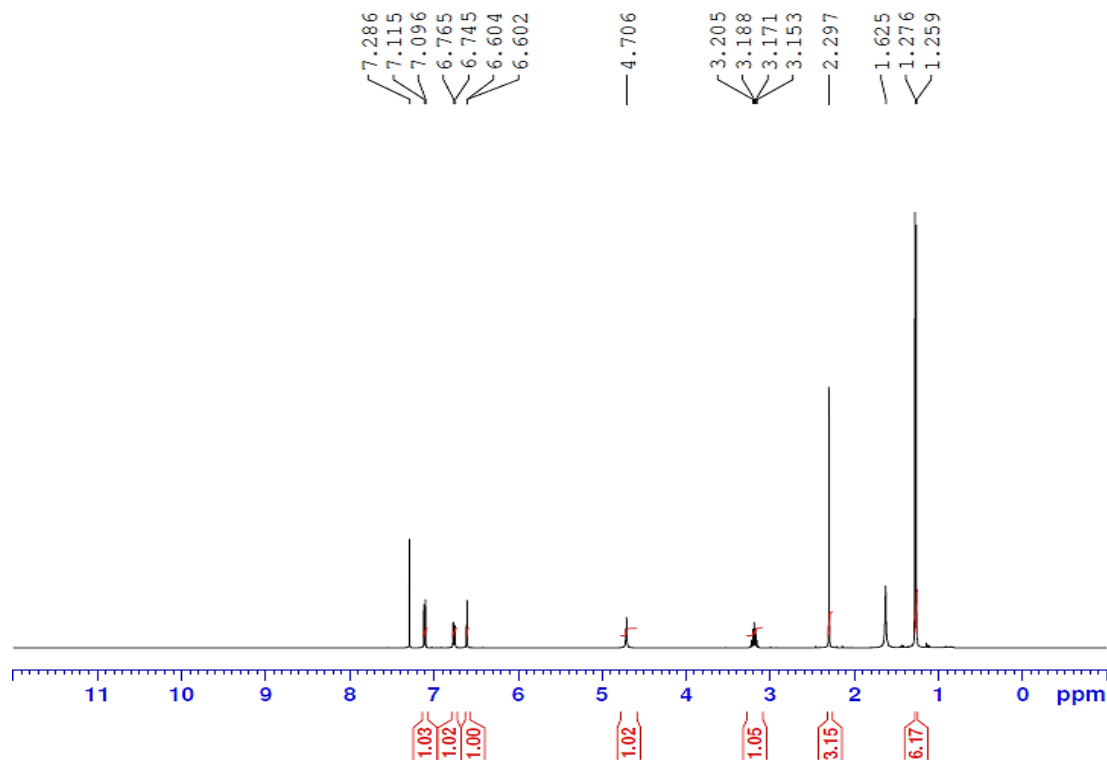
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¹H NMR Spectrum:

Product Name: Thymol

Product Code: PSR42479

Thymol
B. NO-T42479T1023
¹H-NMR in CDCL₃



Identification by ¹H NMR: Conforms to structure

Maximum limits of impurities

WATER DETERMINATION

Method: Karl Fisher titration

Water Content (PSR42479) = **0.1815 %**

Approved By
Head - Technical

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