

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.



Assay by GC-FID

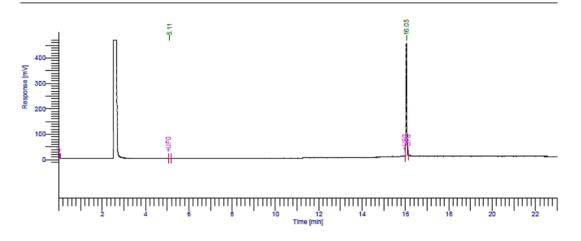
METHOD: GC- FID conditions:

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 Operator	: 6.3.4.0700 : manager	Date Sample Name	: 27-12-2023 17:17:52 : 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		
Sample Volume	: 1.000000 ul		
Sample Amount	: 1.0000	Area Reject	
Data Acquisition Time	: 27-12-2023 16:44:42	Dilution Factor	
-		Cycle	: 1



GC Reports

Peak Component	Time	Area	Height	Area
# Name	[min]	[uV*sec]	[uV]	[%]
1 2	5.112	1528.47	551.80	0.12
	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 %

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

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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 , 27-Dec-2023 + 14:48:32 THYMOL-T42479T1023 Scan EI+ 2.06e9 91.0462 100-150.1173 134,5041 135.5999 149.5011 96 116.8965 106.9574 104 9691 77.1138 1,36.3533 64.6133 79.1734 67.3615 121.2822 52,2402 63,1016 102.2264 62.2769 132.6547 151.2812 89.1937 92.4184 .2985 93.3788 88.4390 148.5426 127.5855 152.3082 լլլոլ Щц 142 92 102 132 152

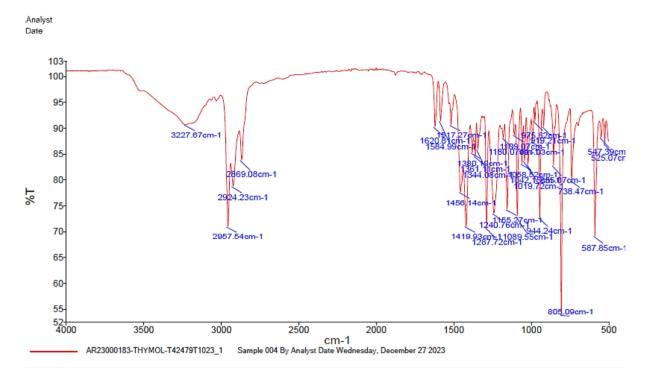
Identification by GC-MS: Conforms to molecular mass

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Infrared spectrum:

Product Name: Thymol Product Code: PSR42479



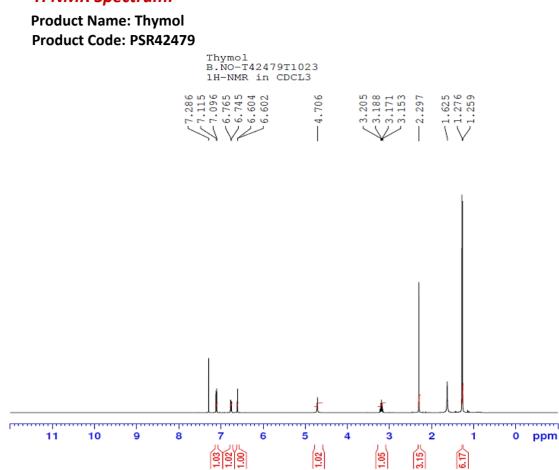
Spectrum Name Number Of Peaks AR23000183.THYMOL-T42479T1023_1 31 Peak Number X (cm-1) Y (%T) 1 3227.67 90.75 2 2857.54 71.04 3 12924.23 78.84 4 2869.08 83.92 5 1524.23 78.84 4 2869.08 83.92 5 1524.99 91.49 7 1517.27 90.66 8 1458.14 77.72 9 1419.93 71.06 10 1380.19 85.34 11 1361.11 84.67 12 1344.08 85.98 13 1287.72 70.92 14 120.76 73.58 15 1180.07 88.22 16 1105.27 74.355 17 1008.05 73.01 19 1058.52 83.18 20 1042.15 83.77 21 101	Source Spectra Results		
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30 547.39 88.29		587.85	69.22
	30	547.39	88.29
31 525.07 87.19	31	525.07	87.19

Identification by IR: Conforms to structure

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¹H NMR Spectrum:



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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