Certificate of Analysis

Methyl Cyclohexane

PurTech Standard for GC

Product Number	PSI028	**CAS No.**	108-87-2
Brand	PureSynth	**Lot No.**	M28273P0
Molecular Formula	C_7H_{14}	**Date of Mfg.**	February,2025
Molecular Weight	98.19 g/mol	**Date of Exp.**	January,2028

Test	Specification	Result
Description	Colorless liquid	Colorless liquid
Assay (GC-FID)	≥ 99.0 %	99.73 %
Water (By KF)	NMT 0.05 %	0.047 %
Density	0.75-0.80 g/cm^3	0.77 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 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.

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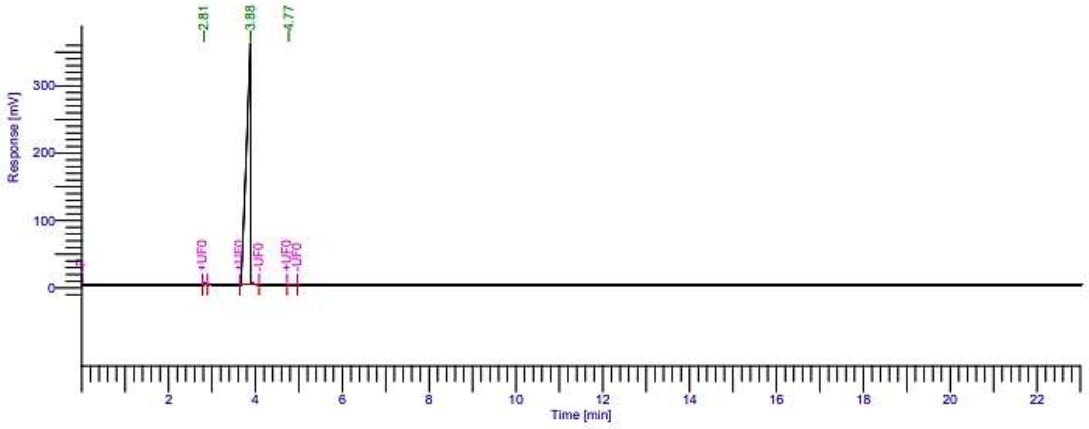
Assay by GC-FID

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	: 28-03-2025 10:21:53
Operator	: manager	Sample Name	: METHYL CYCLOHEXANE
Sample Number	: 001	Study	:
AutoSampler	: BUILT-IN	Rack/Vial	: 0/6
Instrument Name	: Clarus 690	Channel	: A
Instrument Serial #	: None	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	Area Reject	: 0.000000
Sample Amount	: 1.0000	Dilution Factor	: 1.00
Data Acquisition Time	: 28-03-2025 09:52:04	Cycle	: 1



GC Reports

Peak #	Component Name	Time [min]	Area [uV*sec]	Height [uV]	Area [%]
1		2.811	5352.29	2718.99	0.22
2		3.883	2420641.35	357822.57	99.73
3		4.767	1104.02	250.36	0.05
			2427097.66	360791.92	100.00

Missing Component Report

Component	Expected Retention (Calibration File)

All components were found

Purity by GC-FID: 99.73 %

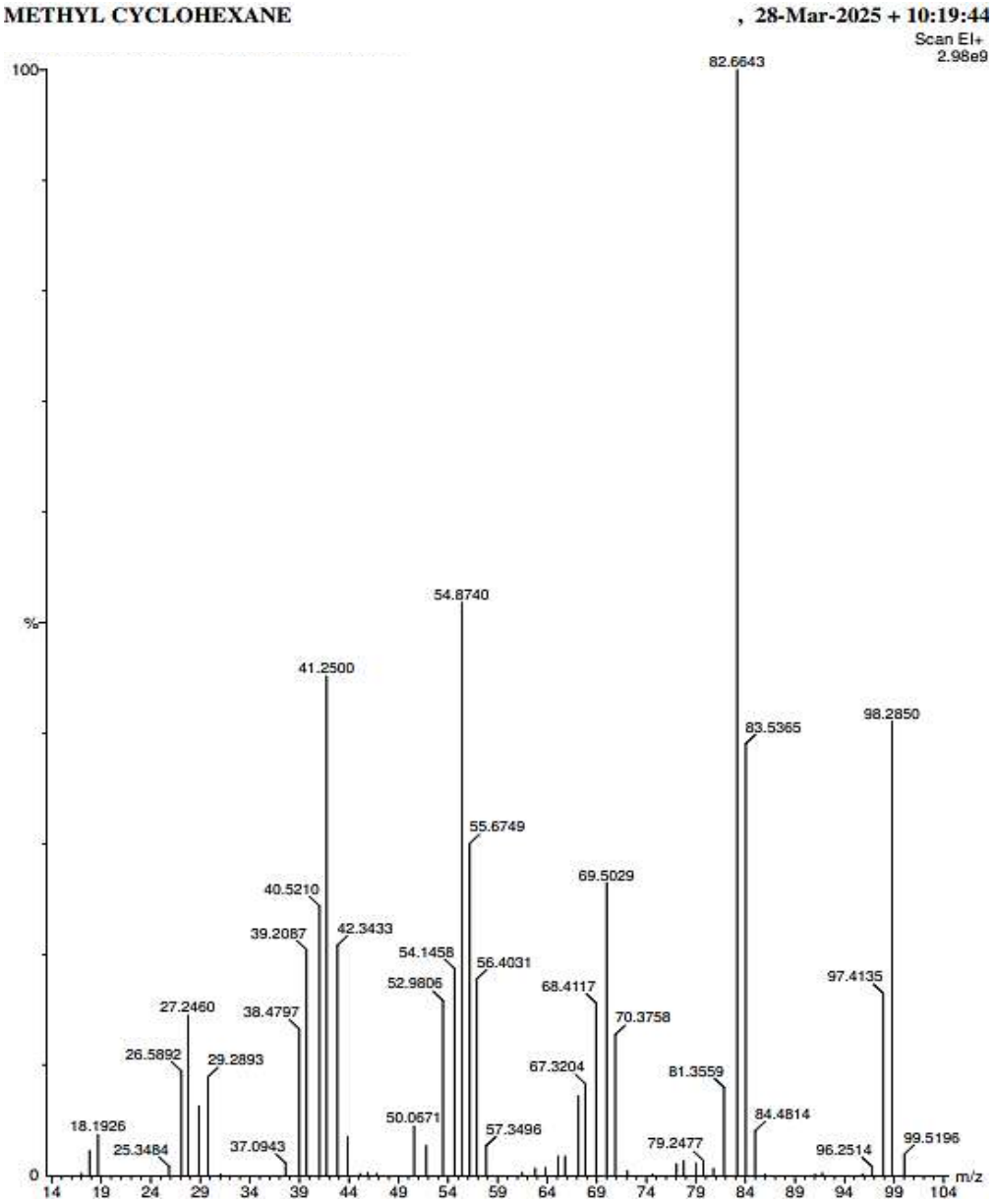
IDENTIFICATION TESTS

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:

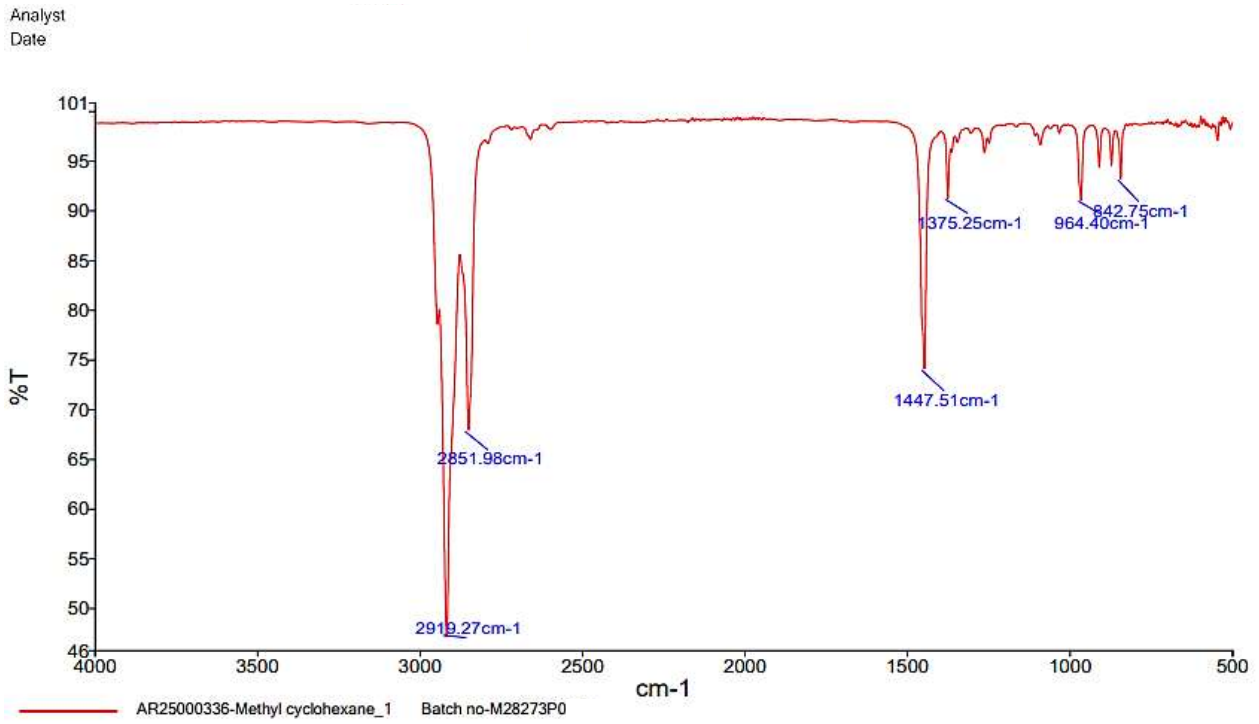
Product Name: Methyl Cyclohexane
Product Code: PSI028



Identification by GC-MS: Conforms to molecular mass

Infrared spectrum:

Product Name: Methyl Cyclohexane
Product Code: PSI028



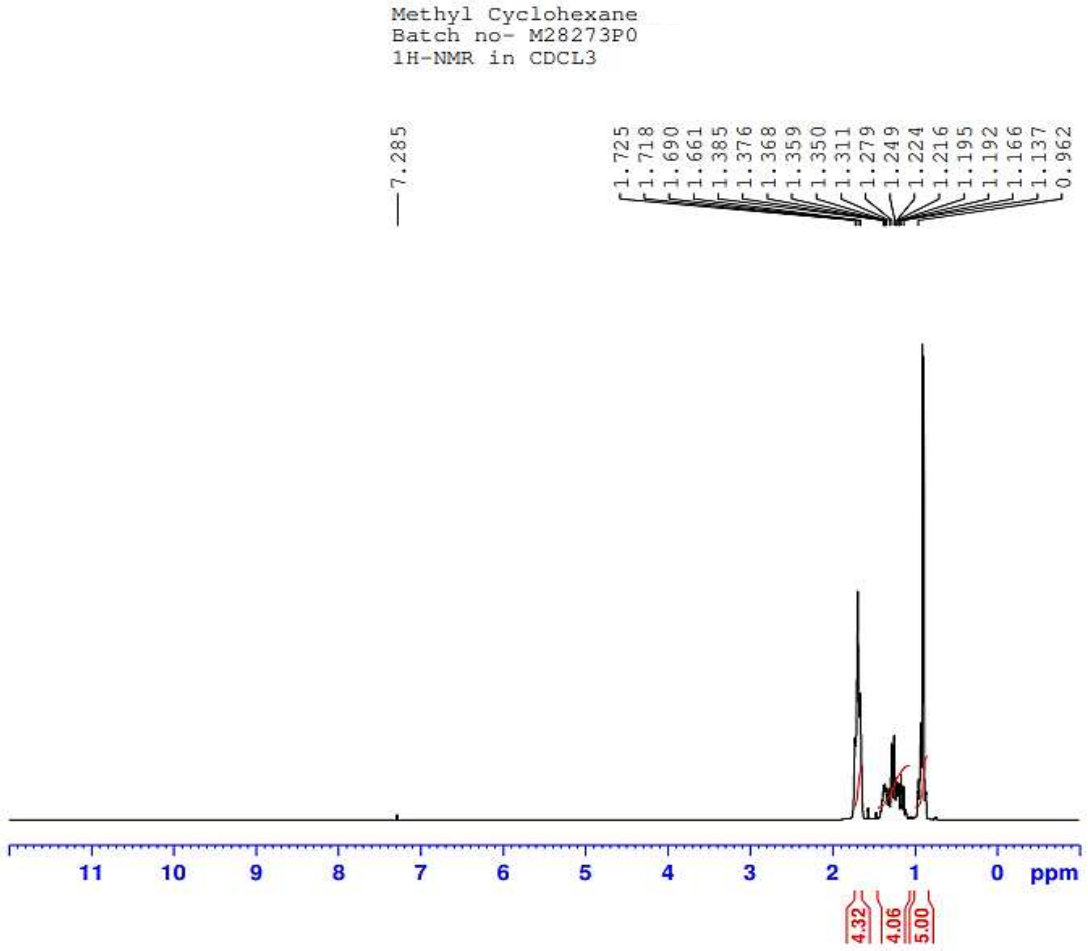
Source Spectra Results	
Spectrum Name	Number Of Peaks
AR25000336-Methyl cyclohexane_1	13

List of Peak Area/Height		
Peak Number	X (cm-1)	Y (%T)
1	2947.61	78.61
2	2919.27	47.08
3	2851.98	67.95
4	2660.99	97.25
5	1447.51	74.12
6	1375.25	91.33
7	1262.03	95.91
8	1090.48	96.71
9	964.40	91.11
10	908.71	94.45
11	871.09	94.64
12	842.75	93.23
13	544.40	97.18

Identification by IR: Conforms to structure

[1]H NMR Spectrum:

Product Name: Methyl Cyclohexane
Product Code: PSI028



Identification by [1]H NMR: Conforms to structure

Maximum limits of impurities

WATER DETERMINATION

Method: Karl Fisher titration
Water Content (PSI028) = **0.047 %**

Approved By
Head - Technical

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

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