

Certificate of Analysis

n-heptane

PurTech Standard for GC

(Secondary Reference Standard)

Product Number	PSI064	CAS No.	142-82-5
Brand	PureSynth	Lot No.	8312P0324
Molecular Formula	C ₇ H ₁₆	Date of Mfg.	March,2024
Molecular Weight	100.2 g/mol	Date of Exp.	February,2027

Test	Specification	Result
Description	Colorless liquid	Colorless liquid
Assay (GC-FID)	≥ 99.0 %	99.44 %
Water (By KF)	NMT 0.100 %	0.0882 %
Density		0.68 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 USP Reference standard, Current lot no: R052R0.**

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:

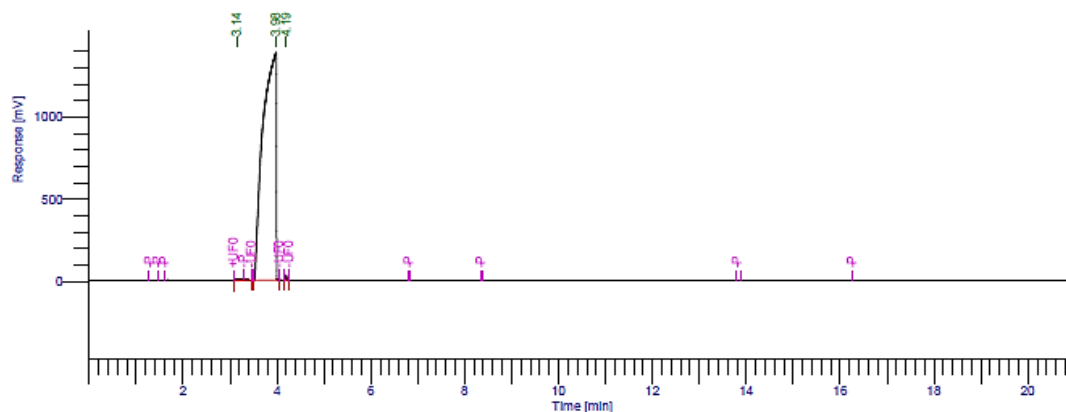
Column: Agilent Technologies DB-FFAP 30mx 0.530mm, 1.0micron

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	: 29-04-2024 10:39:09
Operator	: manager	Sample Name	: N-HEPTANE- 8312P0324
Sample Number	: 001	Study	:
AutoSampler	: BUILT-IN	Rack/Vial	: 0/28
Instrument Name	: Clarus 690	Channel	: A
Instrument Serial #	: None	A/D mV Range	: 1000
Delay Time	: 0.00 min	End Time	: 21.00 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	: 26-04-2024 13:41:13	Cycle	: 1



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:

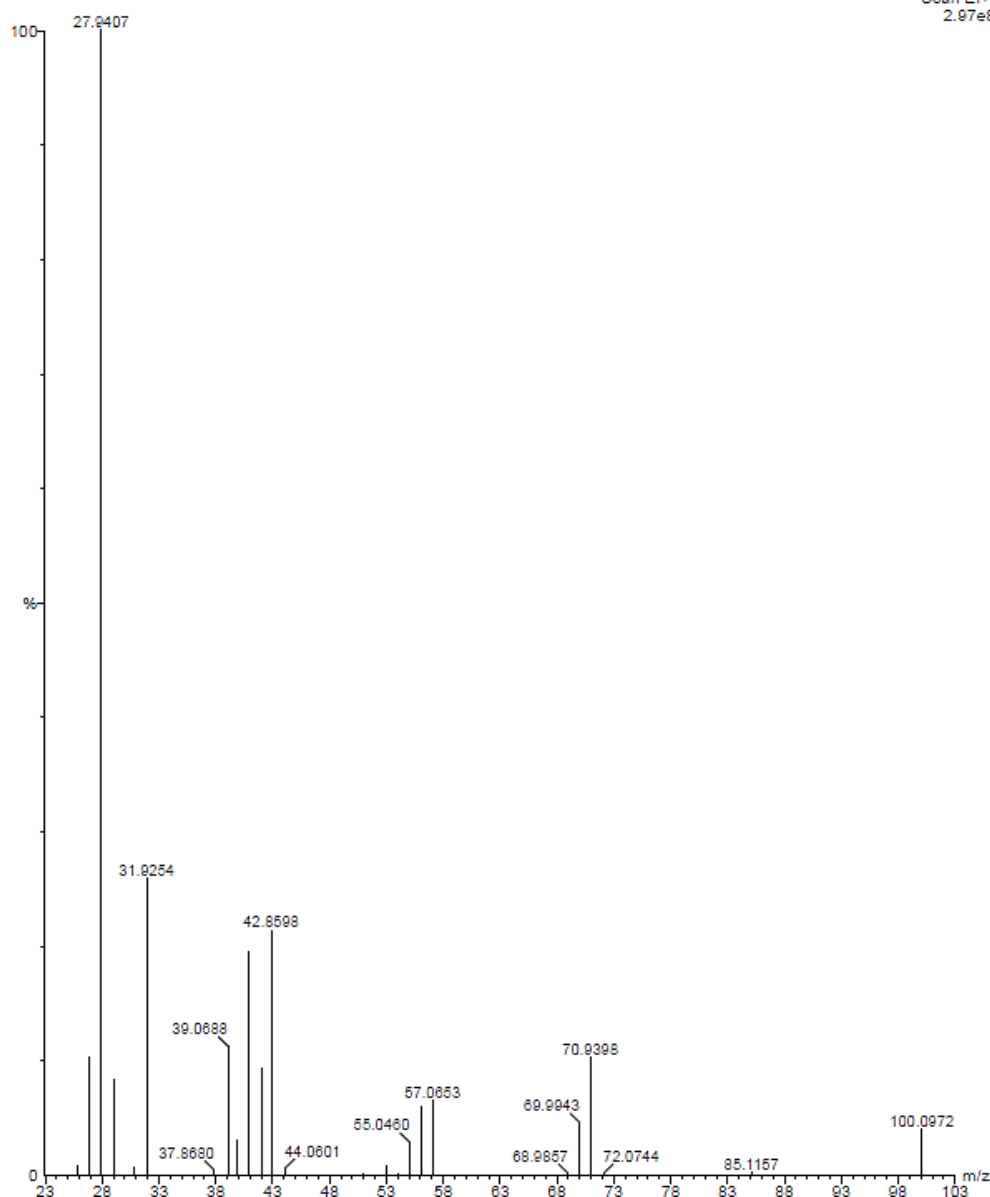
Product Name: n-heptane

Product Code: PSI064

n-heptane- 8312P0324

, 27-Apr-2024 + 09:18:11

Scan EI+
2.97e8



Identification by GC-MS: Conforms to molecular mass

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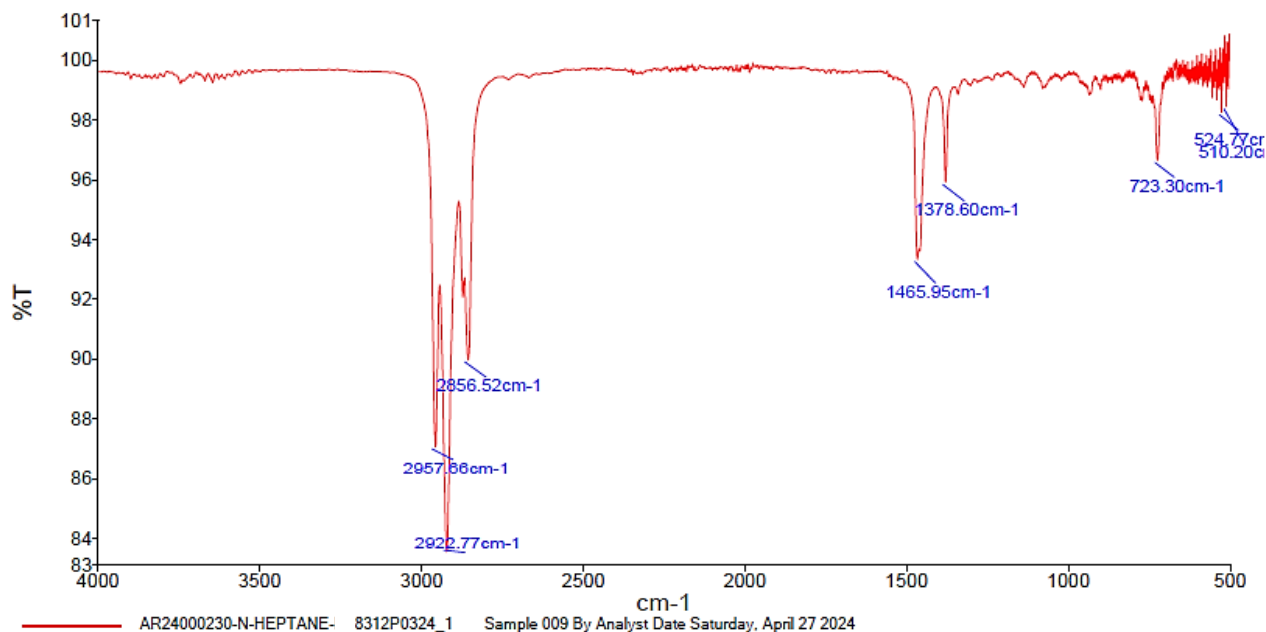
Infrared spectrum:

Product Name: n-heptane

Product Code: PSI064

Analyst

Date



Source Spectra Results		
Spectrum Name-		Number Of Peaks
AR24000230-N-HEPTANE-H28312P0324_1		8
List of Peak Area/Height		
Peak Number	X (cm-1)	Y (%T)
1	2957.66	87.03
2	2922.77	83.53
3	2856.52	89.95
4	1465.95	93.31
5	1378.60	95.88
6	723.30	96.63
7	524.77	98.23
8	510.20	98.42

Identification by IR: Conforms to structure

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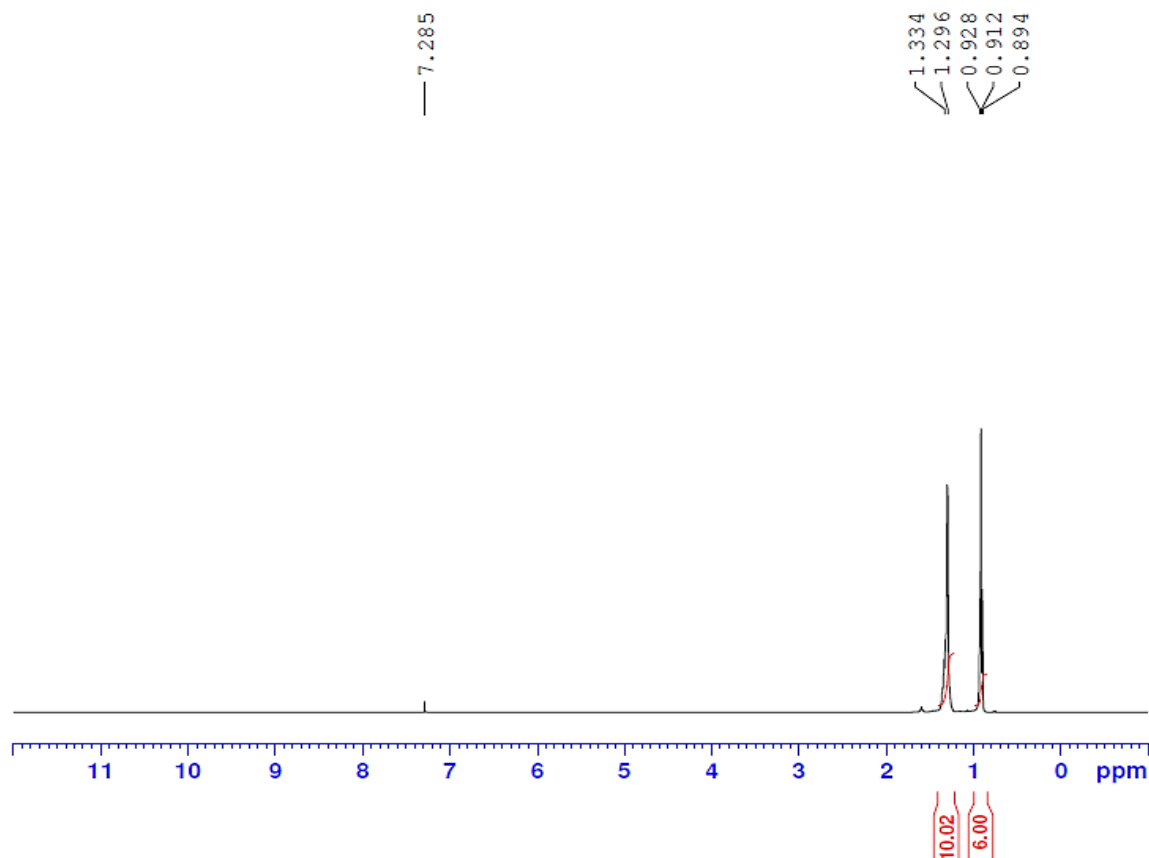
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¹H NMR Spectrum:

Product Name: n-heptane

Product Code: PSI064

n-heptane
Batch No: 8312P0324
1H-NMR in CDCL₃



Identification by ¹H NMR: Conforms to structure

Maximum limits of impurities

WATER DETERMINATION

Method: Karl Fisher titration

Water Content (PSI064) = **0.0882 %**

Approved By
Head - Technical

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