

Certificate of Analysis

Nonane

PurCert Standard for GC

Product Number	PSR38451	CAS No.	111-84-2
Brand	PureSynth	Lot No.	N38451P0225
Molecular Formula	C ₉ H ₂₀	Date of Mfg.	February,2025
Molecular Weight	128.26 g/mol	Date of Exp.	January,2028

Test	Specification	Result
Description	Colorless Liquid	Colorless Liquid
Assay (GC-FID)	≥ 99.5 %	99.86 %
Water (By KF)	NMT 0.200 %	0.146 %
Density	0.70-0.75 g/cm ³	0.72 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.

Assay by GC-FID

METHOD: GC- FID conditions:

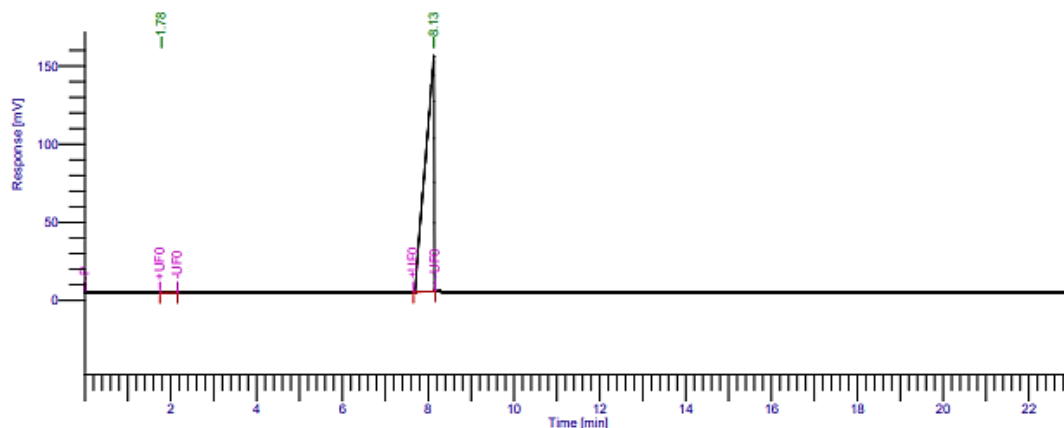
Column: Agilent Technologies DB-FFAP 30mx 0.530mm, 1.0micron

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	: 24-03-2025 11:36:24
Operator	: manager	Sample Name	: NONANE-N38451P0225
Sample Number	: 001	Study	:
AutoSampler	: BUILT-IN	Rack/Vial	: 0/40
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	: 24-03-2025 10:46:11	Cycle	: 1



GC Reports

Peak #	Component Name	Time [min]	Area [uV*sec]	Height [uV]	Area [%]
1		1.781	3046.44	264.06	0.14
2		8.133	2107936.59	150539.28	99.86
			2110983.03	150803.35	100.00

Missing Component Report

Component Expected Retention (Calibration File)

All components were found

Purity by GC-FID: 99.86 %

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:

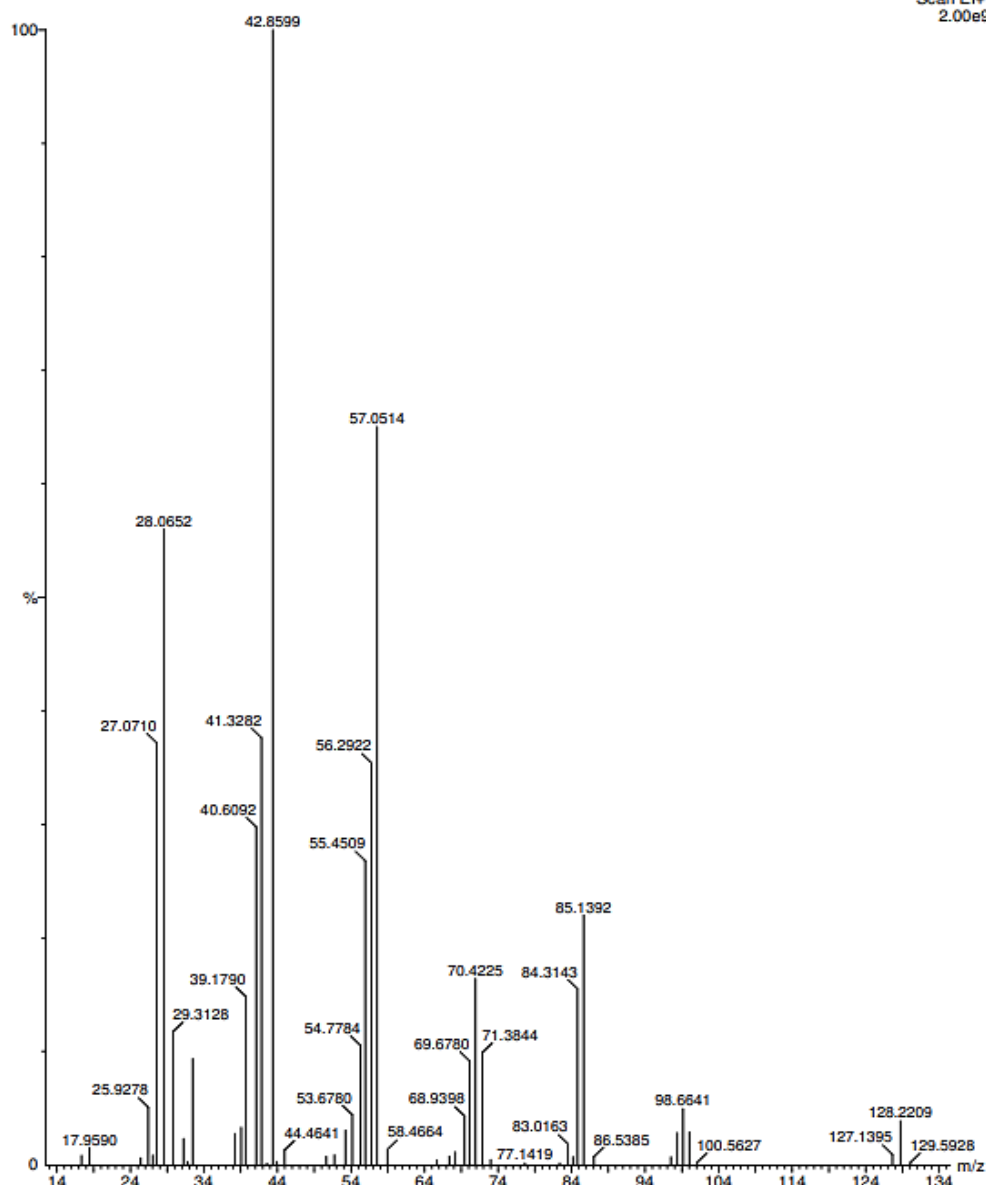
Product Name: Nonane

Product Code: PSR38451

Nonane-N38451P0225

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Scan EI+
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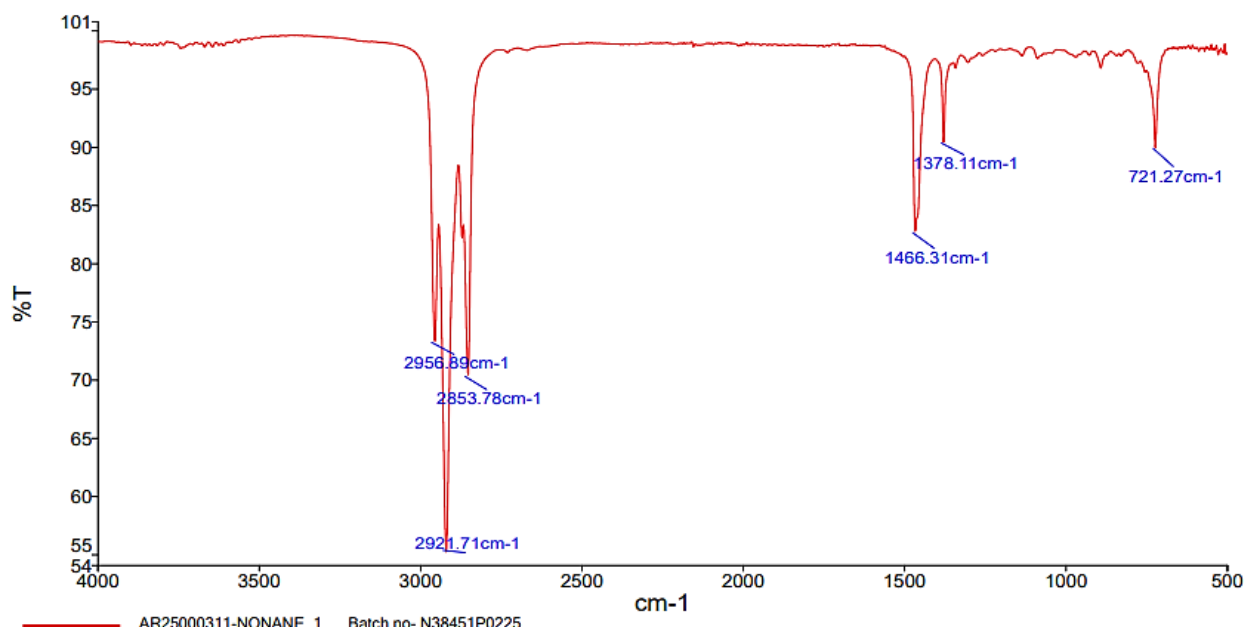
Identification by GC-MS: Conforms to molecular mass

Infrared spectrum:

Product Name: Nonane

Product Code: PSR38451

Analyst
Date



Source Spectra Results		
Spectrum Name		Number Of Peaks
AR25000311-NONANE_1		8
List of Peak Area/Height		
Peak Number	X (cm-1)	Y (%T)
1	2956.89	73.37
2	2921.71	55.21
3	2872.56	82.26
4	2853.78	70.46
5	1466.31	82.80
6	1378.11	90.48
7	890.63	96.85
8	721.27	90.03

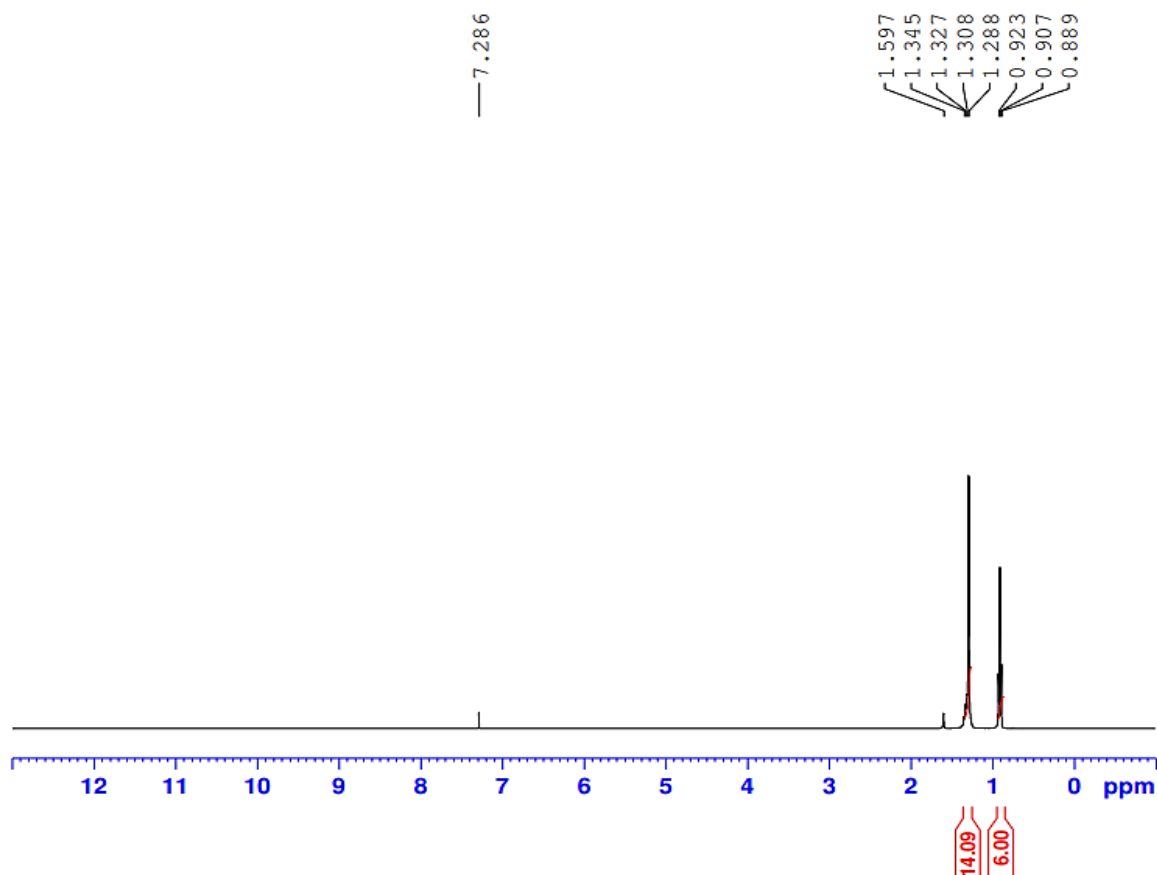
Identification by IR: Conforms to structure

¹H NMR Spectrum:

Product Name: Nonane

Product Code: PSR38451

Nonane
B.No : N38451P0225
¹H-NMR in CDCl₃



Identification by ¹H NMR: Conforms to structure

Maximum limits of impurities

WATER DETERMINATION

Method: Karl Fisher titration

Water Content (PSR38451) = **0.146 %**

Approved By
Head - Technical

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