PureSynth™
Research Chemicals

Certificate of Analysis

n-Hexadecane

PurCert Standard for GC

Product Number	PSI070	**CAS No.**	544-76-3
Brand	PureSynth	**Lot No.**	H070P0525
Molecular Formula	$C_{16}H_{34}$	**Date of Mfg.**	May,2025
Molecular Weight	226.44 g/mol	**Date of Exp.**	April,2030

Test	Specification	Result
Description	Colorless liquid	Colorless liquid
Assay (GC-FID)	≥ 99.5 %	99.58 %
Water (By KF)	NMT 0.5 %	0.108 %
Density	0.770-0.775 g/cm^3	0.773 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.

PureSynth Research Chemicals GmbH, 64683 Einhausen Marie-Curie-StraBe. 3, Germany

✆: 1800-8908-260, ✉: info@pure-synth.com , 🌐: www.pure-synth.com

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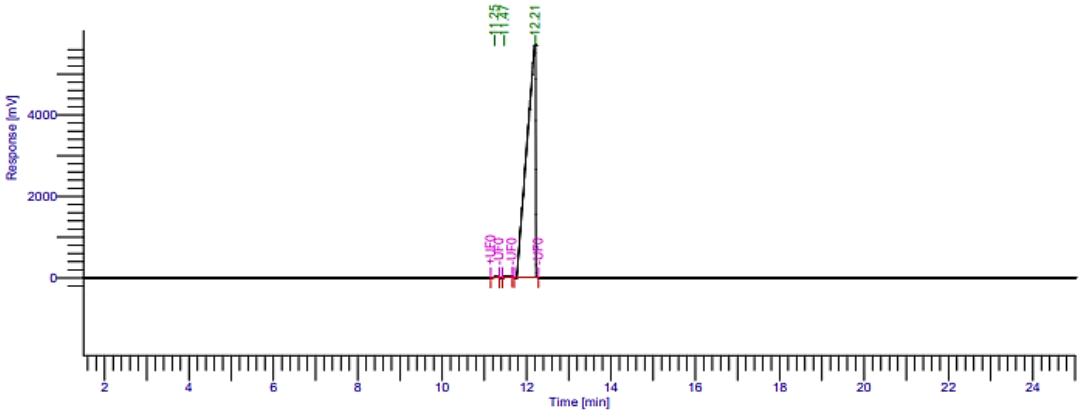
Assay by GC-FID

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	: 21-06-2025 15:55:30
Operator	: manager	Sample Name	: N-HEXADECANE-H070P0525
Sample Number	: 001	Study	:
AutoSampler	: BUILT-IN	Rack/Vial	: 0/1
Instrument Name	: Clarus 690	Channel	: A
Instrument Serial #	: None	A/D mV Range	: 1000
Delay Time	: 0.00 min	End Time	: 25.00 min
Sampling Rate	: 12.5000 pts/s		
Sample Volume	: 1.000000 ul		
Sample Amount	: 1.0000	Area Reject	: 0.000000
Data Acquisition Time	: 21-06-2025 13:32:49	Dilution Factor	: 1.00
		Cycle	: 1



GC Reports

Peak #	Component Name	Time [min]	Area [uV*sec]	Height [uV]	Area [%]
1		11.249	106816.98	15902.80	0.13
2		11.473	236227.55	31372.90	0.29
3		12.211	82176415.77	5.93e+06	99.58
			82519460.29	5.98e+06	100.00

Warning -- Signal level out-of-range in peak

Missing Component Report

Component	Expected Retention (Calibration File)

All components were found

Purity by GC-FID: 99.58 %

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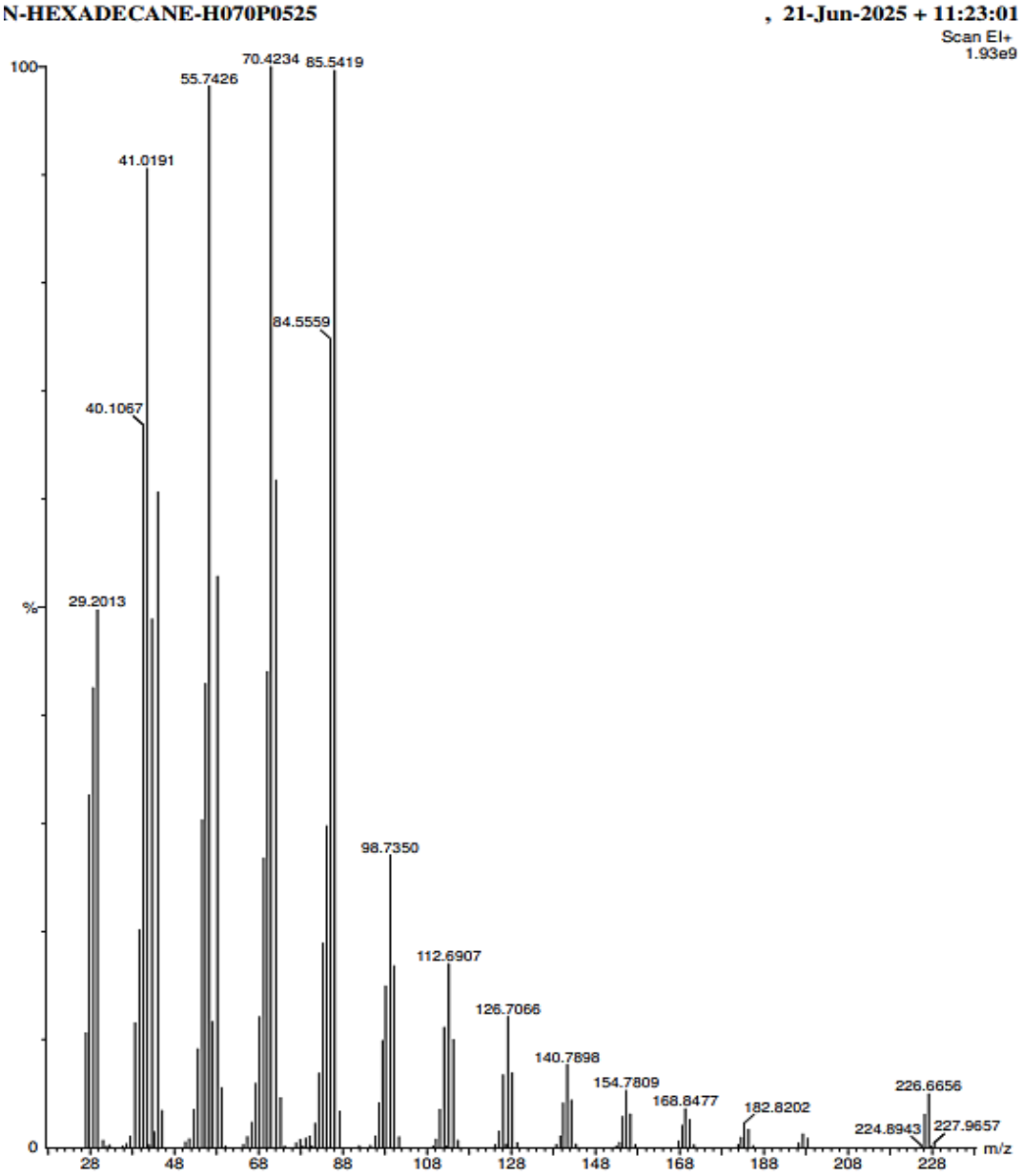
IDENTIFICATION TESTS

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: n-Hexadecane
Product Code: PSI070



Identification by GC-MS: Conforms to molecular mass

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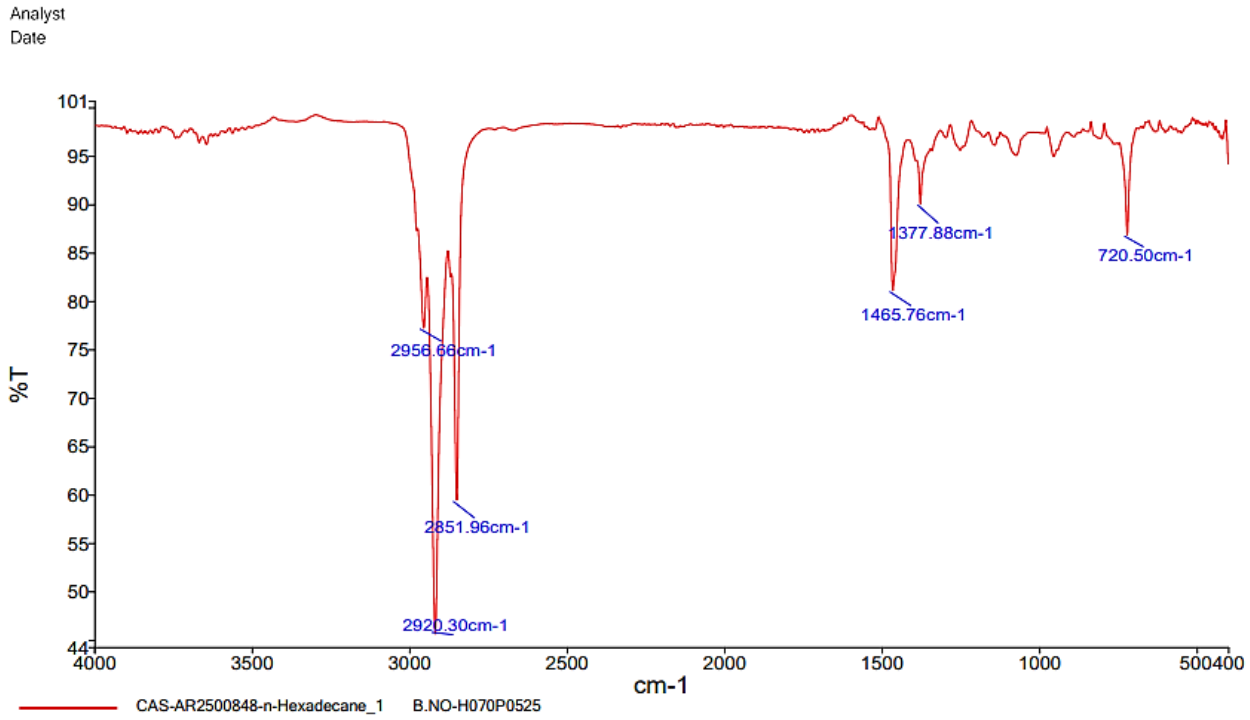
Infrared spectrum:

Product Name: n-Hexadecane

Product Code: PSI070



Source Spectra Results	
Spectrum Name	Number Of Peaks
CAS-AR2500848-n-Hexadecane_1	17

List of Peak Area/Height		
Peak Number	X (cm-1)	Y (%T)
1	3744.61	96.95
2	3647.05	96.28
3	2956.66	77.29
4	2920.30	45.62
5	2851.96	59.49
6	1523.04	97.84
7	1465.76	81.15
8	1377.88	90.12
9	1251.14	95.70
10	1141.49	96.22
11	1073.06	95.15
12	954.61	95.06
13	805.04	96.93
14	720.50	86.90
15	632.93	97.61
16	547.99	97.47
17	417.49	96.85

Identification by IR: Conforms to structure

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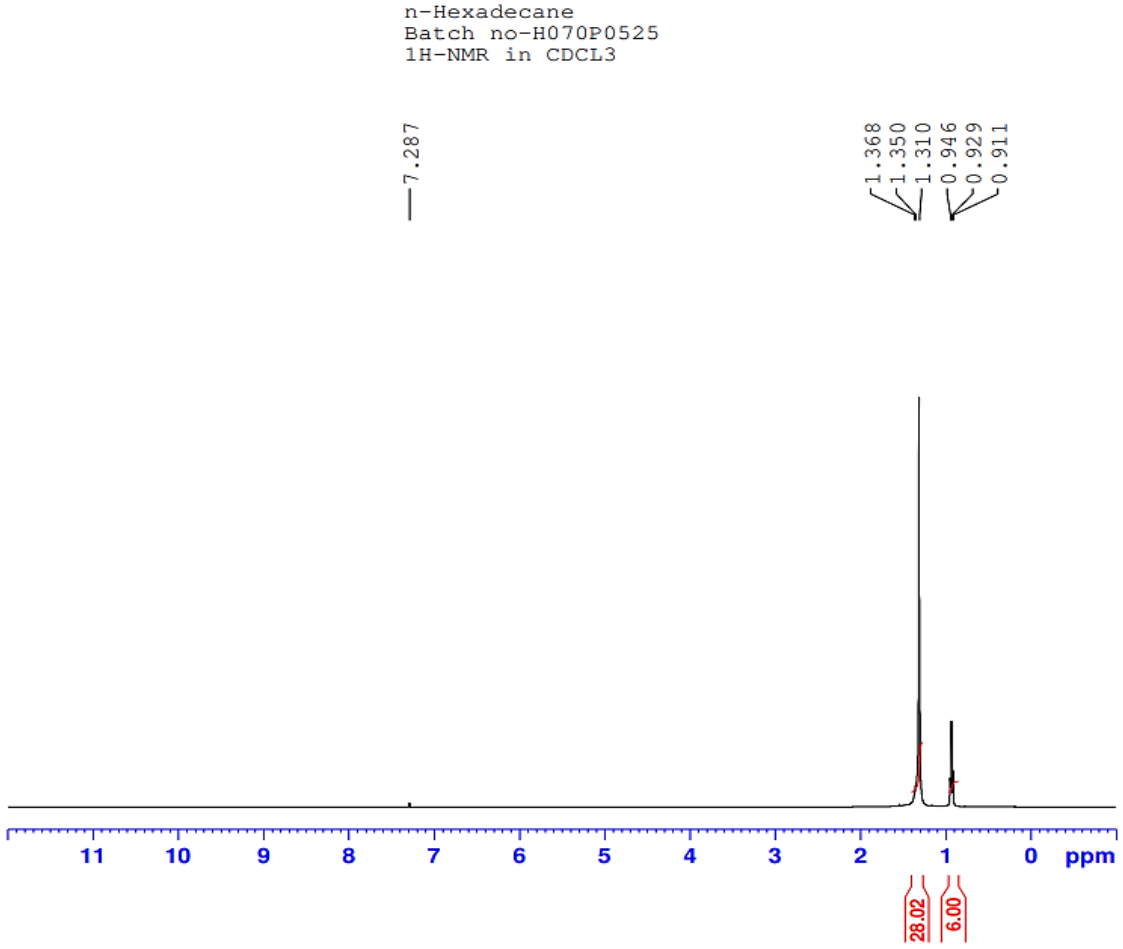
[1]H NMR Spectrum:

Product Name: n-Hexadecane
Product Code: PSI070



Identification by [1]H NMR: Conforms to structure

Maximum limits of impurities

WATER DETERMINATION

Method: Karl Fisher titration
Water Content (PSI070) = **0.108 %**

Approved By
Head - Technical

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

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