

Certificate of Analysis

2-Pentanone

PurCert Standard for GC

Product Number	PSR46471	CAS No.	107-87-9
Brand	PureSynth	Lot No.	P46471T0225
Molecular Formula	C ₅ H ₁₀ O	Date of Mfg.	February,2025
Molecular Weight	86.13 g/mol	Date of Exp.	January,2028

Test	Specification	Result
Description	Colorless Liquid	Colorless Liquid
Assay (GC-FID)	≥ 99.0 %	99.98 %
Water (By KF)	NMT 0.5 %	0.118 %
Density	0.800-0.810 g/cm ³	0.809 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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Toll free no. 1800-8908-260, Email: info@pure-synth.com , Website: www.pure-synth.com

Assay by GC-FID

METHOD: GC- FID conditions:

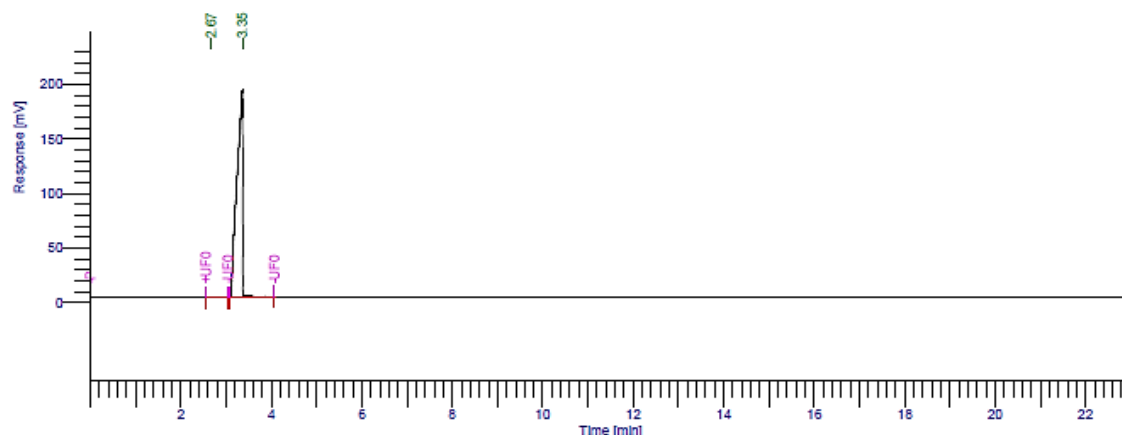
Column: Agilent Technologies DB-FFAP 30mx 0.530mm, 1.0micron

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	: 06-03-2025 17:03:58
Operator	: manager	Sample Name	: 2-PENTANONE
Sample Number	: 001	Study	:
AutoSampler	: BUILT-IN	Rack/Vial	: 0/32
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	: 06-03-2025 16:12:42	Cycle	: 1



GC Reports

Peak #	Component Name	Time [min]	Area [uV*sec]	Height [uV]	Area [%]
1		2.668	242.45	18.80	0.02
2		3.355	1602213.63	189762.29	99.98
			1602456.08	189781.09	100.00

Missing Component Report

Component Expected Retention (Calibration File)

All components were found

Purity by GC-FID: 99.98 %

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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

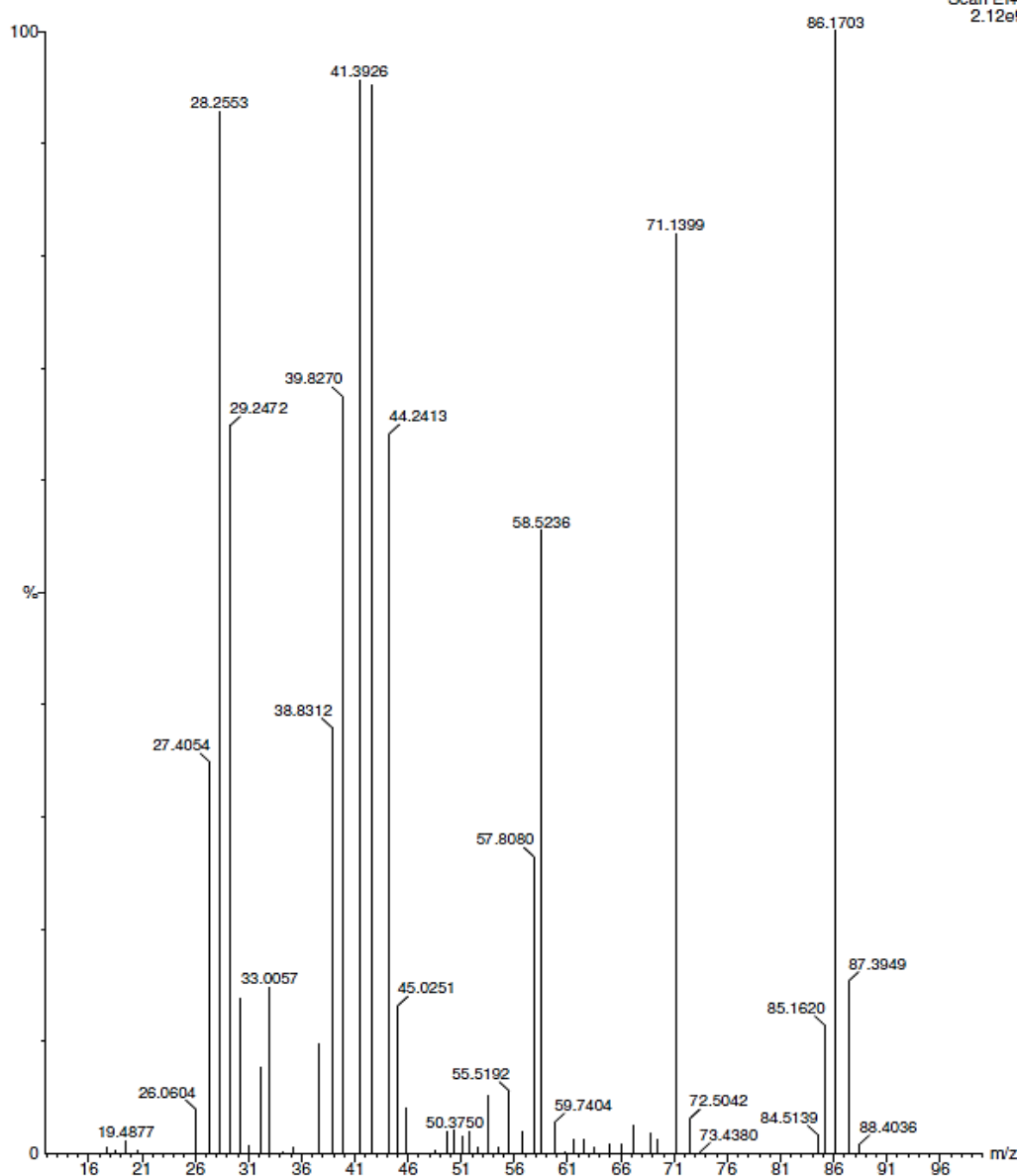
Mass by GC-MS:

Product Name: 2-Pentanone

Product Code: PSR46471

2-PENTANONE-P46471T0225

, 07-Mar-2025 + 15:42:13
Scan EI+
2.12e9



Identification by GC-MS: Conforms to molecular mass

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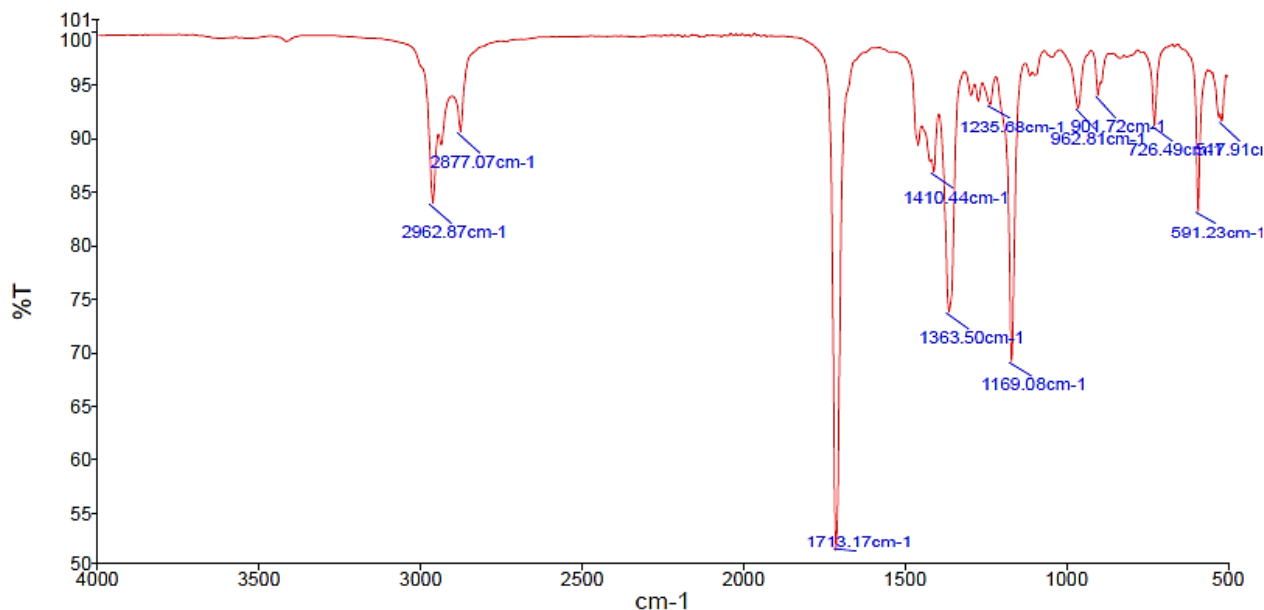
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Infrared spectrum:

Product Name: 2-Pentanone

Product Code: PSR46471

Analyst
Date



AR25000259-2-Pentanone_1-P46471T0225_1 Sample 099 By Analyst Date Friday, March 07 2025

Source Spectra Results		
Spectrum Name		Number Of Peaks
AR25000259-2-Pentanone_1-P46471T0225_1		17
List of Peak Area/Height		
Peak Number	X (cm-1)	Y (%T)
1	2962.87	84.00
2	2936.84	89.47
3	2877.07	90.70
4	1713.17	51.50
5	1458.57	89.43
6	1410.44	86.93
7	1363.50	73.84
8	1294.82	94.10
9	1272.33	93.56
10	1235.68	93.23
11	1169.08	69.21
12	1111.94	95.95
13	962.81	92.93
14	901.72	94.13
15	726.49	91.27
16	591.23	83.25
17	517.91	91.68

Identification by IR: Conforms to structure

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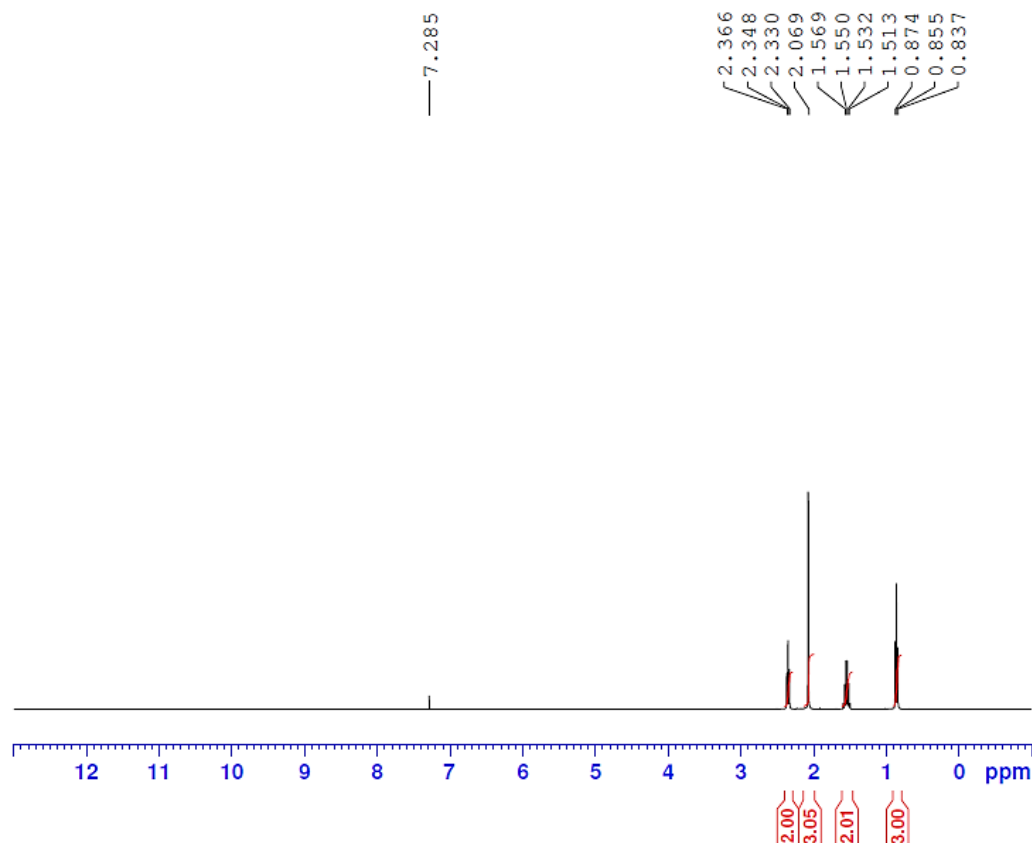
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¹H NMR Spectrum:

Product Name: 2-Pentanone

Product Code: PSR46471

2-Pentanone
B.No : P46471T0225
1H-NMR in CDCl₃



Identification by ¹H NMR: Conforms to structure

Maximum limits of impurities

WATER DETERMINATION

Method: Karl Fisher titration

Water Content (PSR46471) = **0.118 %**

Approved By
Head - Technical