

Certificate of Analysis

3-Pentanone

PurCert Standard for GC

Product Number	PSR28335	CAS No.	96-22-0
Brand	PureSynth	Lot No.	P28335P0325
Molecular Formula	C ₅ H ₁₀ O	Date of Mfg.	March,2025
Molecular Weight	86.13 g/mol	Date of Exp.	February,2030

Test	Specification	Result
Description	Colorless liquid	Colorless liquid
Assay (GC-FID)	≥ 99.5 %	99.99 %
Water (By KF)	NMT 0.05 %	0.0193 %
Density	0.810-0.820 g/cm ³	0.813 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:

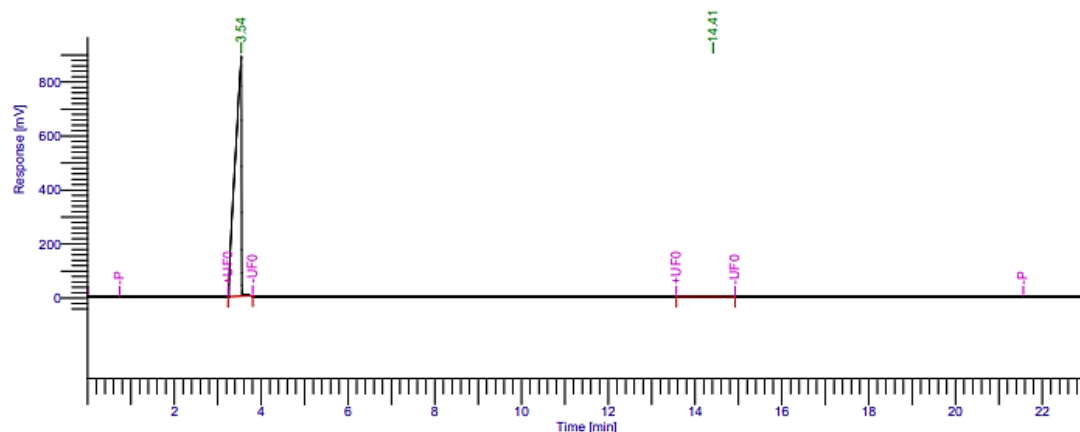
Column: Agilent Technologies DB-FFAP 30mx 0.530mm, 1.0micron

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	: 21-04-2025 17:24:13
Operator	: manager	Sample Name	: 3-PENTANONE-P28335P0325
Sample Number	: 001	Study	:
AutoSampler	: BUILT-IN	Rack/Vial	: 0/19
Instrument Name	: Clarus 690	Channel	: A
Instrument Serial #	: 690S23050206	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	: 21-04-2025 16:26:30	Cycle	: 1



GC Reports

Peak #	Component Name	Time [min]	Area [uV*sec]	Height [uV]	Area [%]
1		5.633	85.81	196.07	0.01
2		8.216	1084376.45	177265.98	99.99
			1084462.25	177462.05	100.00

Missing Component Report

Component Expected Retention (Calibration File)

All components were found

Purity by GC-FID: 99.99 %

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: 3-Pentanone

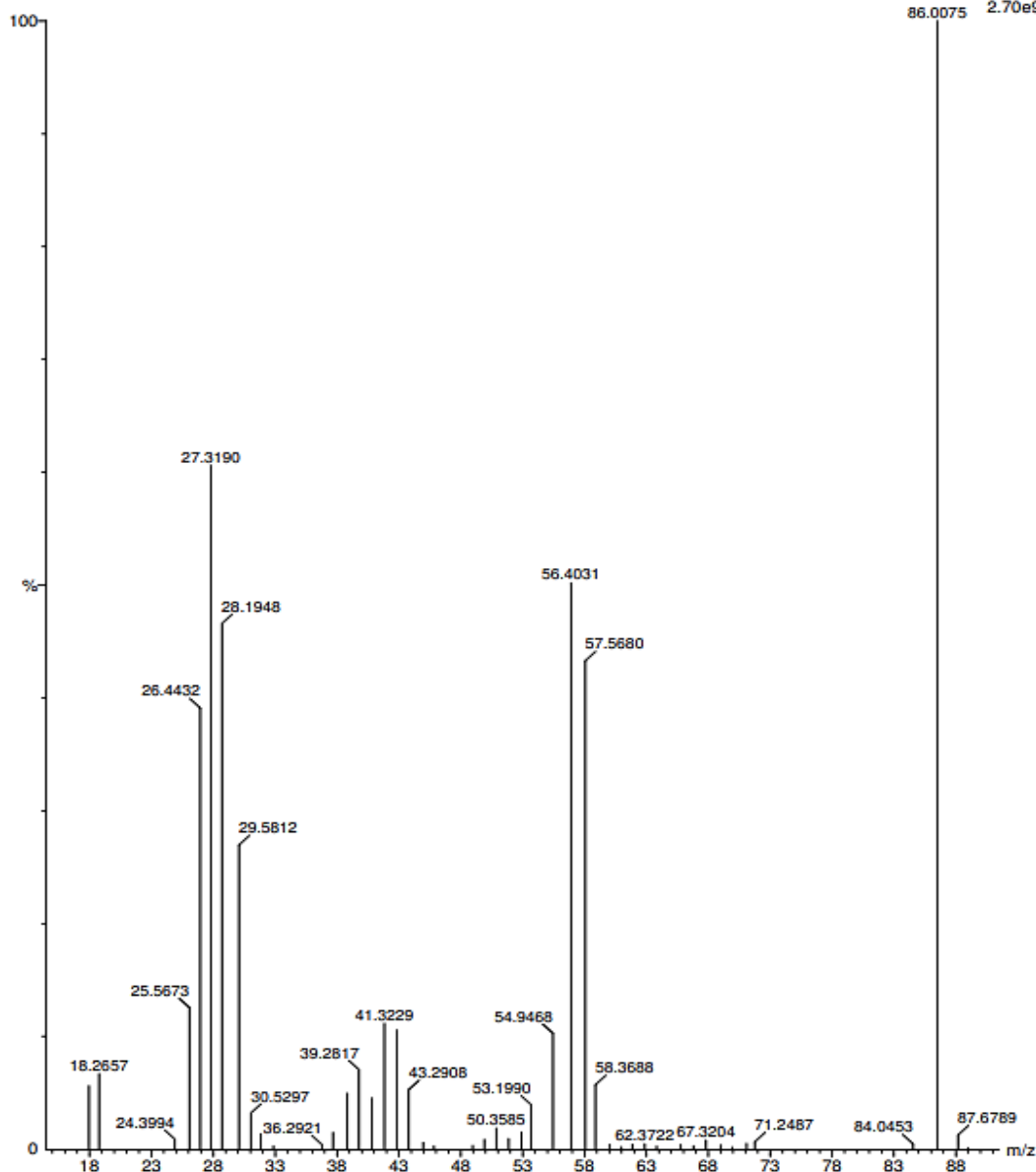
Product Code: PSR28335

PENTANONE-P28335P0325

, 22-Apr-2025 + 11:08:04

Scan EI+

86.0075 2.70e9



Identification by GC-MS: Conforms to molecular mass

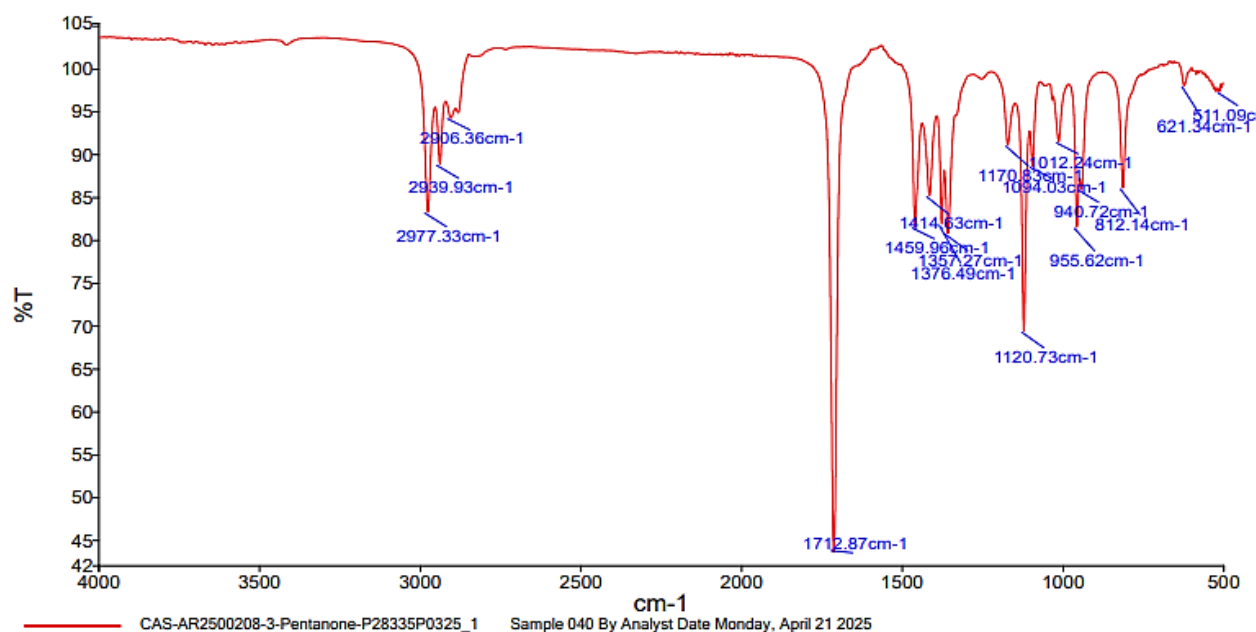
Infrared spectrum:

Product Name: 3-Pentanone

Product Code: PSR28335

Analyst

Date



Source Spectra Results		
Spectrum Name		Number Of Peaks
CAS-AR2500208-3-Pentanone-P28335P0325_1		17
List of Peak Area/Height		
Peak Number	X (cm-1)	Y (%T)
1	2977.33	83.39
2	2939.93	88.95
3	2906.36	94.35
4	1712.87	43.58
5	1459.96	81.63
6	1414.63	85.27
7	1376.49	81.96
8	1357.27	80.87
9	1170.83	91.19
10	1120.73	69.48
11	1094.03	88.69
12	1012.24	91.58
13	955.62	81.58
14	940.72	85.96
15	812.14	86.15
16	621.34	98.12
17	511.09	97.42

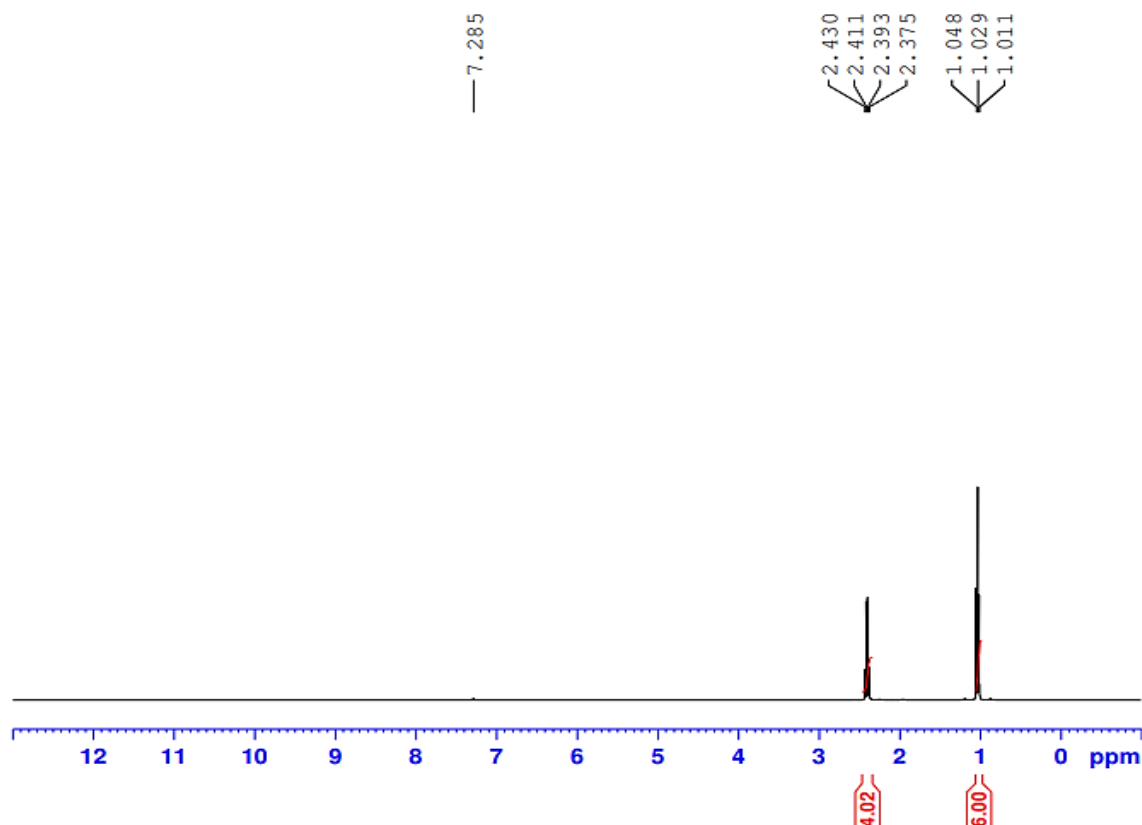
Identification by IR: Conforms to structure

¹H NMR Spectrum:

Product Name: 3-Pentanone

Product Code: PSR28335

3-Pentanone
B.No : P28335P0325
1H-NMR in CDCL₃



Identification by ¹H NMR: Conforms to structure

Maximum limits of impurities

WATER DETERMINATION

Method: Karl Fisher titration

Water Content (PSR28335) = **0.0193 %**

Approved By
Head - Technical

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