

Certificate of Analysis

2-Butanone

PurTech Standard for GC

(Secondary Reference Standard)

Product Number	PSI046	CAS No.	78-93-3
Brand	PureSynth	Lot No.	B046P0524
Molecular Formula	C ₄ H ₈ O	Date of Mfg.	May,2024
Molecular Weight	72.11 g/mol	Date of Exp.	April,2027

Test	Specification	Result
Description	Colorless liquid	Colorless liquid
Assay (GC-FID)	≥ 99.5 %	99.93 %
Water (By KF)	NMT 0.1 %	0.047 %
Density	0.804-0.806 g/cm ³	0.805 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 1430101 with Current Lot No: R063M0.**

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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Worldwide Helpline No. 1800-120-1234-34 , Email: info@pure-synth.com , Website: www.pure-synth.com

Assay by GC-FID

METHOD: GC- FID conditions:

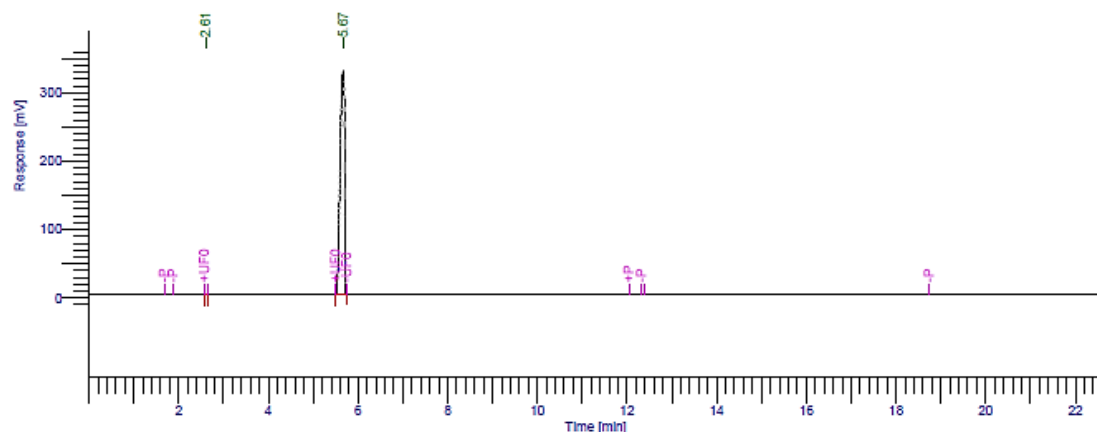
Column: Agilent Technologies DB-FFAP 30mx 0.530mm, 1.0micron

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	: 22-07-2024 13:41:41
Operator	: manager	Sample Name	: 2-BUTANONE-B046P0524
Sample Number	: 001	Study	:
AutoSampler	: BUILT-IN	Rack/Vial	: 0/43
Instrument Name	: Clarus 690	Channel	: A
Instrument Serial #	: None	A/D mV Range	: 1000
Delay Time	: 0.00 min	End Time	: 22.60 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	: 22-07-2024 13:11:13	Cycle	: 1



GC Reports

Peak #	Component Name	Time [min]	Area [uV*sec]	Height [uV]	Area [%]
1		2.607	1569.11	961.27	0.07
2		5.672	2223614.03	326496.33	99.93
			2225183.13	327457.59	100.00

Missing Component Report
Component Expected Retention (Calibration File)

All components were found

Purity by GC-FID: 99.93 %

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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:

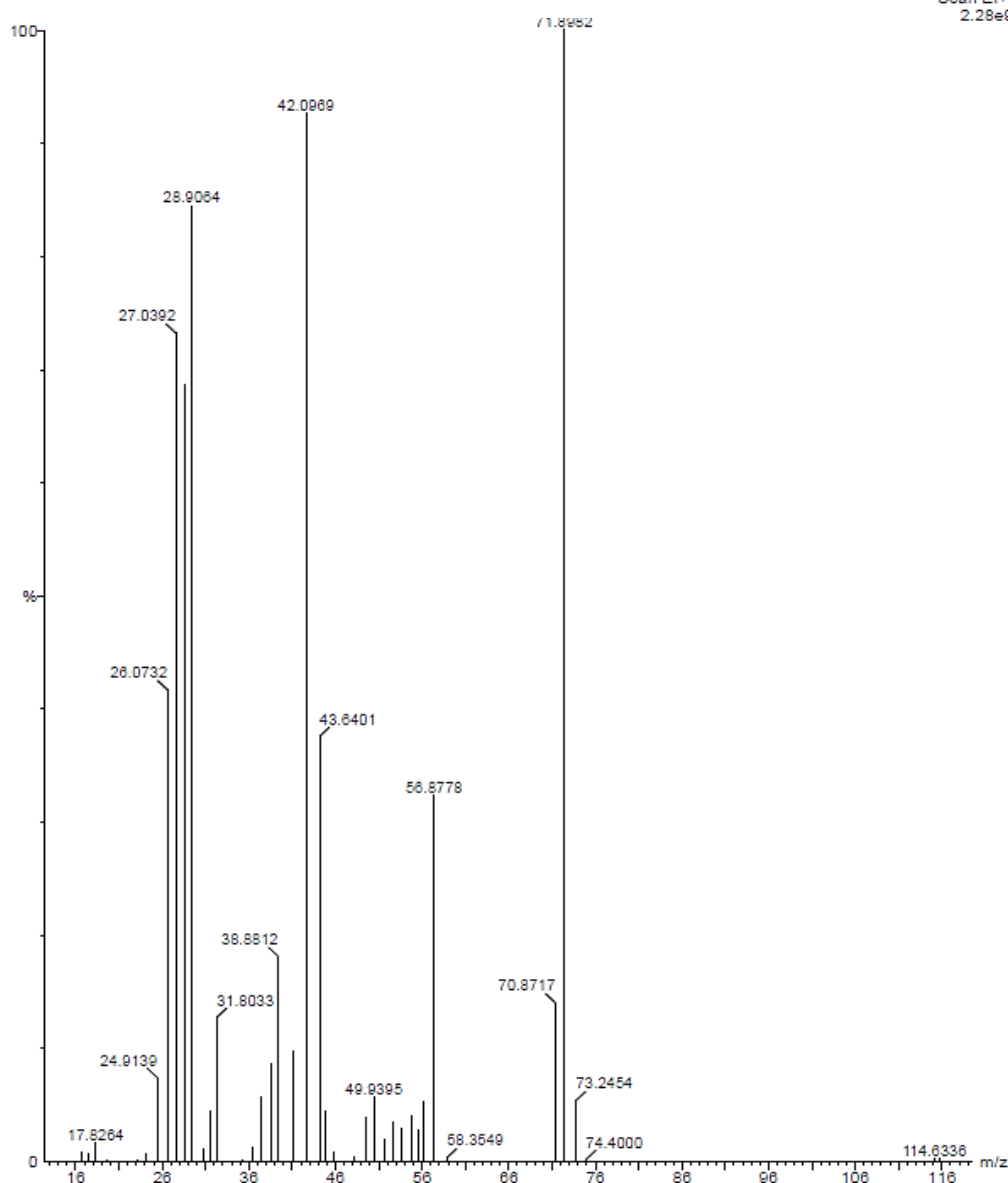
Product Name: 2-Butanone

Product Code: PSI046

2-Butanone

, 22-Jul-2024 + 11:35:31

Scan EI+
2.28e9



Identification by GC-MS: Conforms to molecular mass

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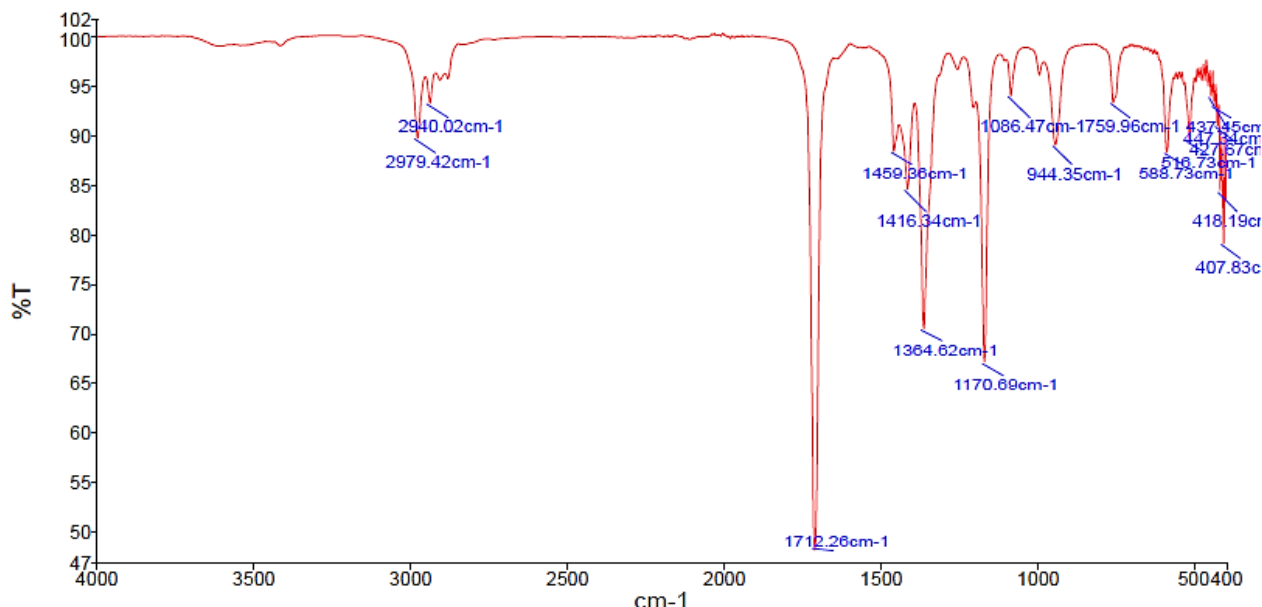
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Infrared spectrum:

Product Name: 2-Butanone

Product Code: PSI046

Analyst
Date



AR24000426-2-Butanone-B046P0524_1 Sample 012 By Analyst Date Monday, July 22 2024

Source Spectra Results		
Spectrum Name		Number Of Peaks
AR24000426-2-Butanone-B046P0524_1		17
List of Peak Area/Height		
Peak Number	X (cm-1)	Y (%T)
1	2979.42	89.85
2	2940.02	93.36
3	1712.26	48.17
4	1459.36	88.49
5	1416.34	84.66
6	1364.62	70.56
7	1170.69	67.18
8	1086.47	94.10
9	944.35	89.13
10	759.96	93.41
11	588.73	88.38
12	516.73	89.51
13	447.34	94.04
14	437.45	93.10
15	427.67	91.06
16	418.19	84.43
17	407.83	79.18

Identification by IR: Conforms to structure

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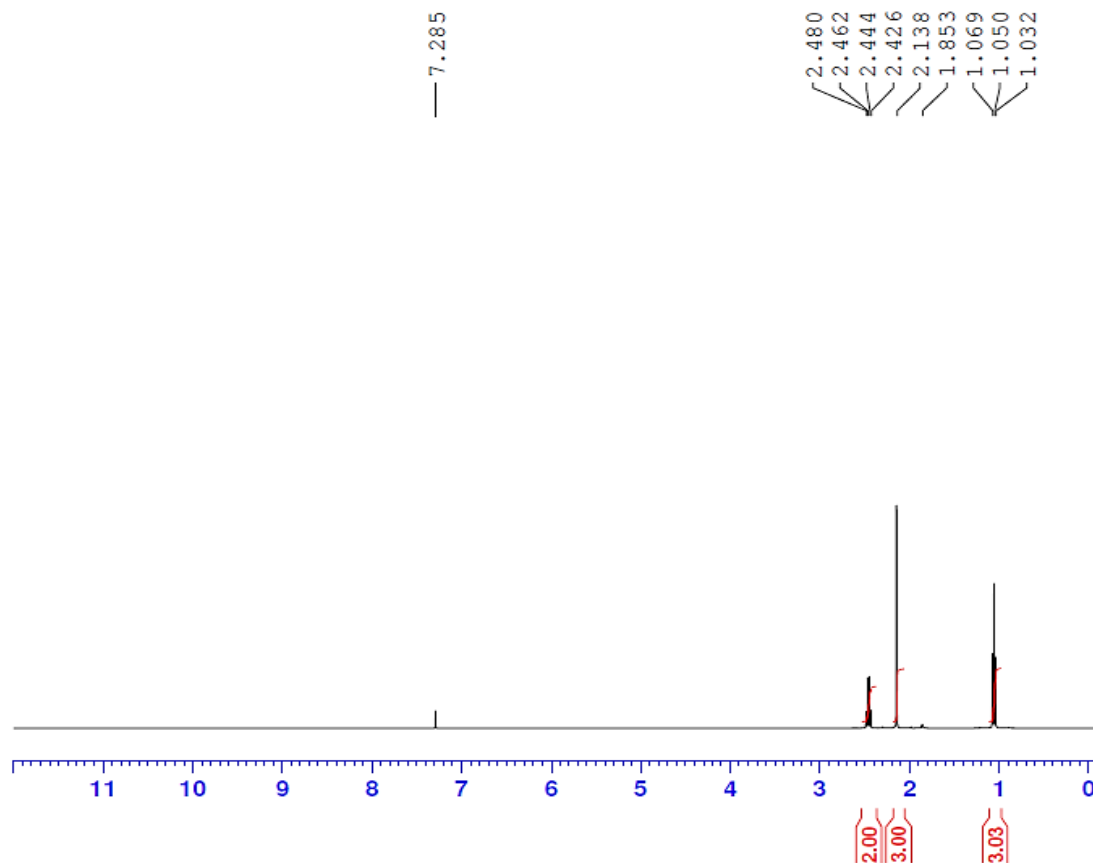
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¹H NMR Spectrum:

Product Name: 2-Butanone

Product Code: PSI046

2-Butanone
B.no-B046P0524
1H-NMR in CDCL₃



Identification by ¹H NMR: Conforms to structure

Maximum limits of impurities

WATER DETERMINATION

Method: Karl Fisher titration

Water Content (PSI046) = **0.047 %**

Approved By
Head - Technical

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