

Certificate of Analysis

2-Furaldehyde

PurCert Standard for GC

Product Number	PSR39655	CAS No.	98-01-1
Brand	PureSynth	Lot No.	VBNM1
Molecular Formula	C ₅ H ₄ O ₂	Date of Mfg.	February.2023
Molecular Weight	96.09 g/mol	Date of Exp.	January.2026

Test	Specification	Result
Description	Yellow Liquid	Yellow Liquid
Assay (GC-FID)	≥ 99.0 %	99.58 %
Water (By KF)	NMT 1.000 %	0.5600 %
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 room temperature.

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:

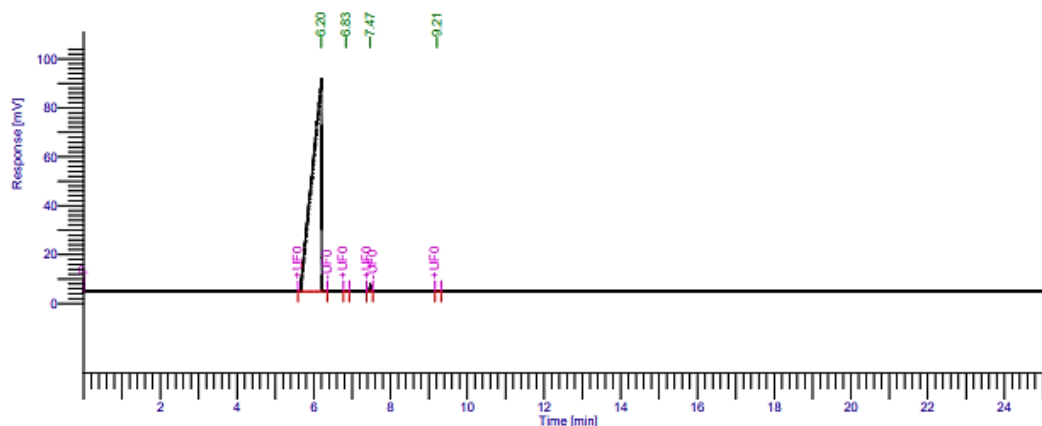
Column: Agilent Technologies DB-FFAP 30mx 0.530mm, 1.0micron

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	: 25/03/2023 10.24.27 AM
Operator	: manager	Sample Name	: AR23000157-2-FURFUAL-VBNM1
Sample Number	: 1	Study	: GC Purity
AutoSampler	: BUILT-IN	Rack/Vial	: 0/40
Instrument Name	: Clarus 680	Channel	: A
Instrument Serial #	: None	A/D mV Range	: 1000
Delay Time	: 0.00 min	End Time	: 25.27 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	: 25/03/2023 9.55.05 AM	Cycle	: 1



GC Reports

Peak #	Component Name	Time [min]	Area [uV*sec]	Height [uV]	Area [%]
1		6.196	1485975.64	86930.25	99.58
2		6.832	575.42	306.41	0.04
3		7.469	4968.88	2897.17	0.33
4		9.208	770.58	370.59	0.05
			1492290.53	90504.43	100.00

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

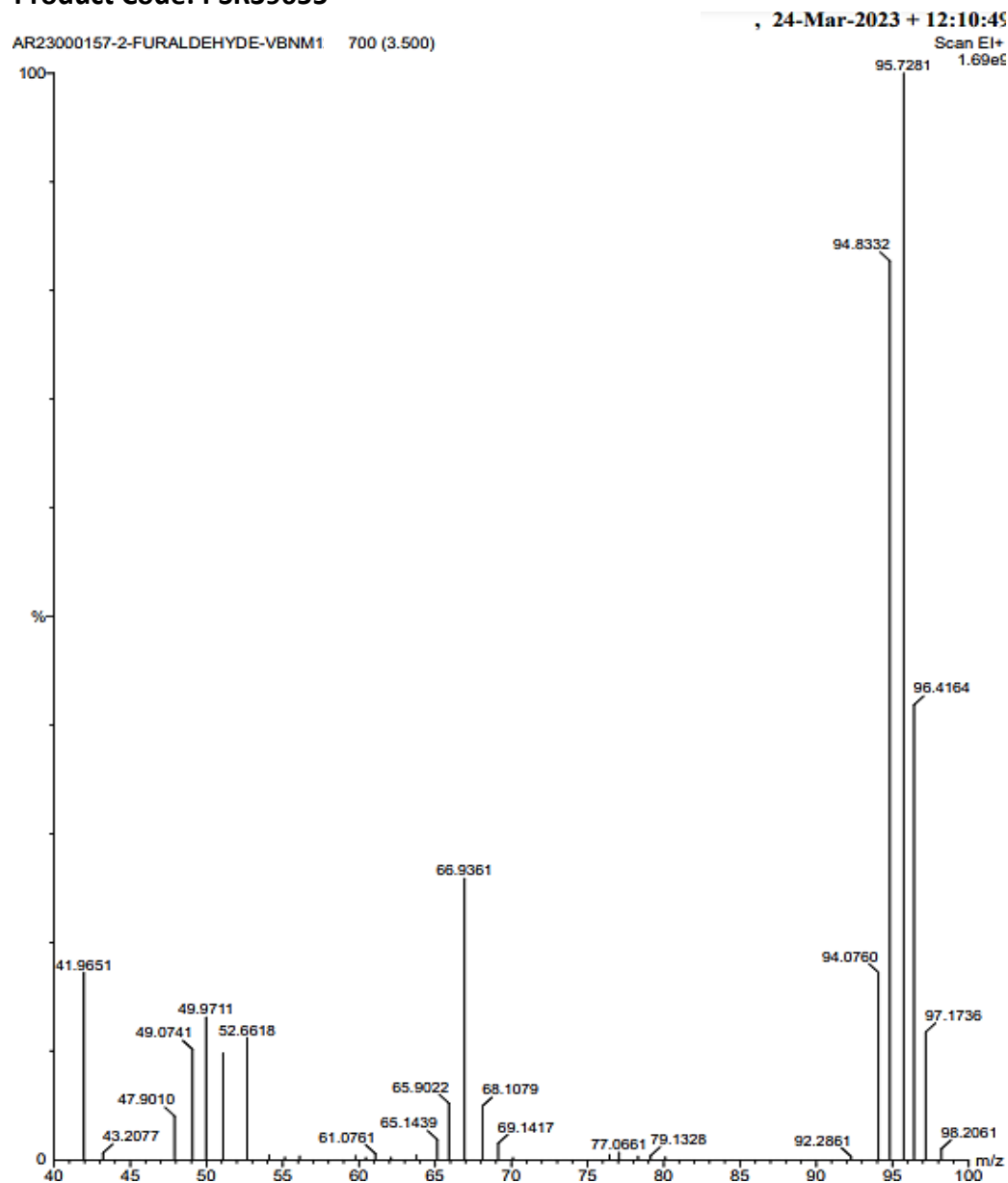
Inlet Temp.: 180°C, **Diluent:** Methanol

Source energy: 70eV

Mass by GC-MS:

Product Name: 2-Furaldehyde

Product Code: PSR39655



Identification by GC-MS: Conforms to molecular mass

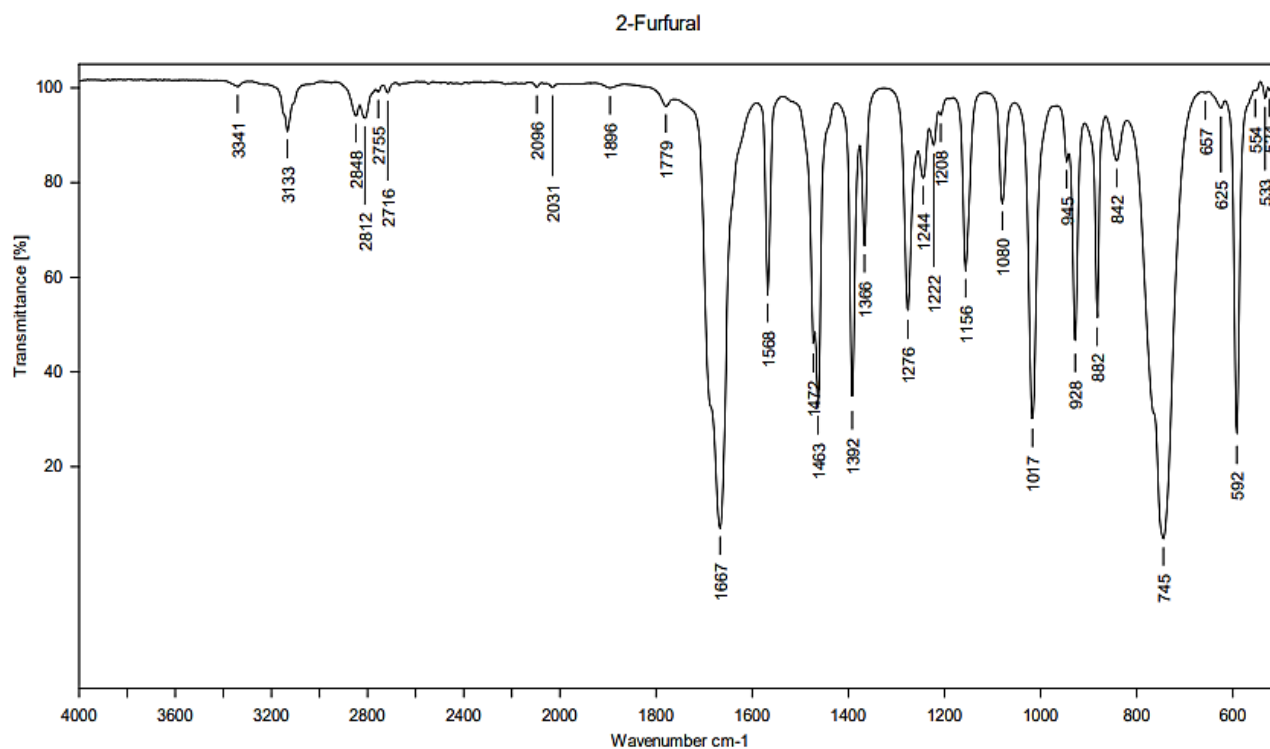
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Infrared spectrum:

Product Name: 2-Furaldehyde

Product Code: PSR39655



Experiment ATR_ZnSe1.XPM

Operator Name Admin

Instrument Type Alpha II

Resolution 4

Path of File C:\PRL

Date of Measurement 28-03-2023

Sample Form Liquid

Sample Scans 32

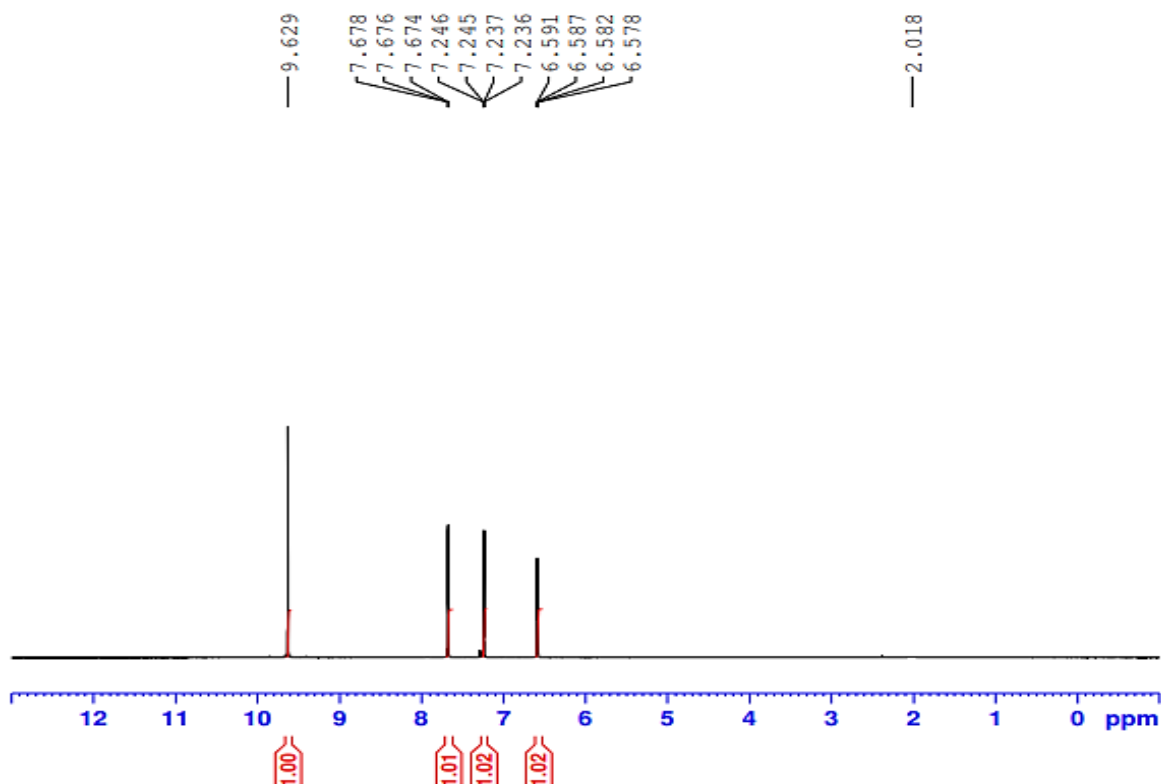
Identification by IR: Conforms to structure

¹H NMR Spectrum:

Product Name: 2-Furaldehyde

Product Code: PSR39655

2-Furaldehyde-VBNM1
1H-NMR in CDCl₃



Identification by ¹H NMR: Conforms to structure

Maximum limits of impurities

WATER DETERMINATION

Method: Karl Fisher titration

Water Content (PSR39655) = **0.5600 %**

Approved By
Head - Technical

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