

# Certificate of Analysis

## PurSol (Absolute)

### PurCert Standard for GC

(Secondary Reference Standard)

<b>Product Number</b>	PSR28298	<b>CAS No.</b>	64-17-5
<b>Brand</b>	PureSynth	<b>Lot No.</b>	PG08H
<b>Molecular Formula</b>	C <sub>2</sub> H <sub>6</sub> O	<b>Date of Mfg.</b>	July,2021
<b>Molecular Weight</b>	46.07 g/mol	<b>Date of Exp.</b>	June,2025

Test	Specification	Result
Description	Colorless liquid	Colorless liquid
Clarity	Clear	Clear
Assay (GC-FID)	≥ 99.0 %	99.04 %
Water (By KF)	≤ 0.2 %	0.1495 %
Density (D 20/20)	0.790 - 0.791	0.790
Refractive index (n 20/D)	1.3612 - 1.3618	1.361
Non-volatile matter	Max. 0.001 %	<0.001 %
Free acid (As CH <sub>3</sub> COOH)	Max. 0.0005 %	<0.0005 %
Free alkali (As NH <sub>3</sub> )	Max. 0.0001 %	<0.0001 %
Acetone (GC)	Max. 0.001 %	<0.001 %
Aldehydes (As CH <sub>3</sub> CHO)	Max. 0.001 %	<0.001 %
Carbonyl compounds (As CO)	Max. 0.003 %	<0.003 %
APHA	Max. 10	<10
Solubility in water	Complying	Complying
Identification by <sup>1</sup> 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 1012688, Lot No: R15200**

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

Worldwide Helpline No. 1800-120-1234-34 , Email: [info@pure-synth.com](mailto:info@pure-synth.com) , Website: [www.pure-synth.com](http://www.pure-synth.com)

**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: G.C- FID conditions:

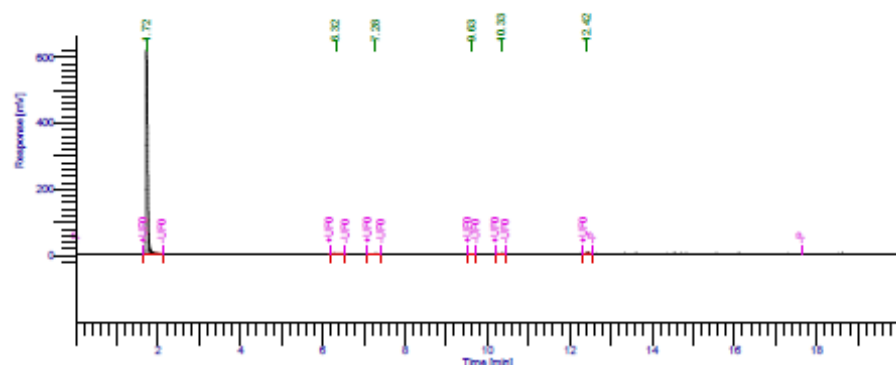
**Column:** Agilent Technologies DB-FFAP 30mx 0.530mm, 1.0micron

**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 : 23-08-2021 4.03.06 PM
Operator : manager	Sample Name : AR21000509-ETHANOL PG08H
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 : 20.00 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 : 23-08-2021 3.40.18 PM	Cycle : 1



### GC Reports

Peak #	Component Name	Time [min]	Area [uV*sec]	Height [uV]	Area [%]
1		1.716	1609803.00	777925.92	99.04
2		6.316	6865.23	634.04	0.42
3		7.284	2954.99	381.01	0.18
4		9.628	1285.00	364.88	0.08
5		10.333	2279.76	307.55	0.14
6		12.417	2274.16	683.26	0.14
			1625462.14	780296.66	100.00

Missing Component Report  
Component Expected Retention (Calibration File)

All components were found

**Purity by GC-FID: 99.04 %**

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

Worldwide Helpline No. 1800-120-1234-34 , Email: [info@pure-synth.com](mailto:info@pure-synth.com) , Website: [www.pure-synth.com](http://www.pure-synth.com)

## IDENTIFICATION TESTS

### GC-MS Spectrum:

#### **METHOD: G.C-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

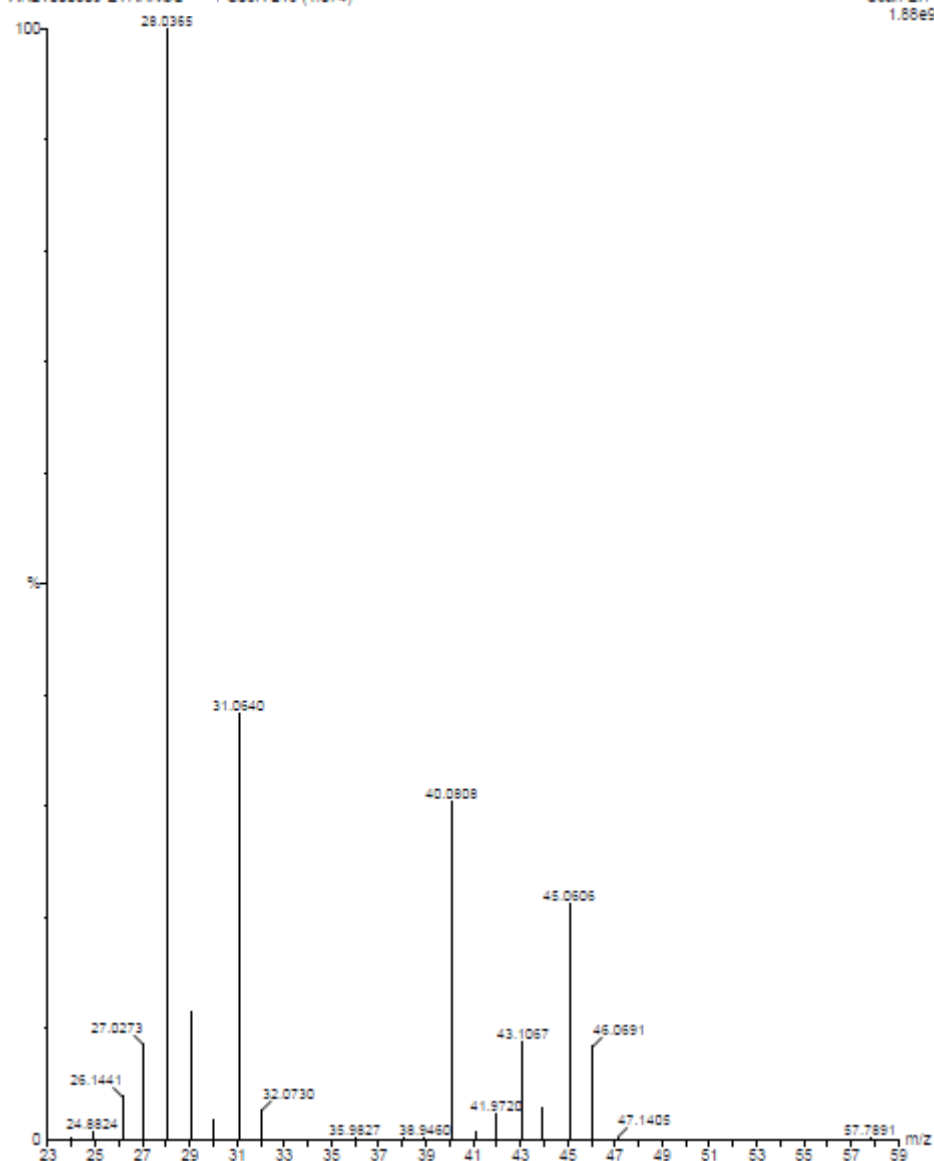
### Mass by GC-MS:

**Product Name:** PurSol

**Product Code:** PSR28298

**ETHANOL PG-08H**  
AR21000509-ETHANOL PG08H 215 (1.074)

23-Aug-2021 + 15:02:27  
Scan E1+  
1.88e9



**Identification by GC-MS: Conforms to molecular mass**

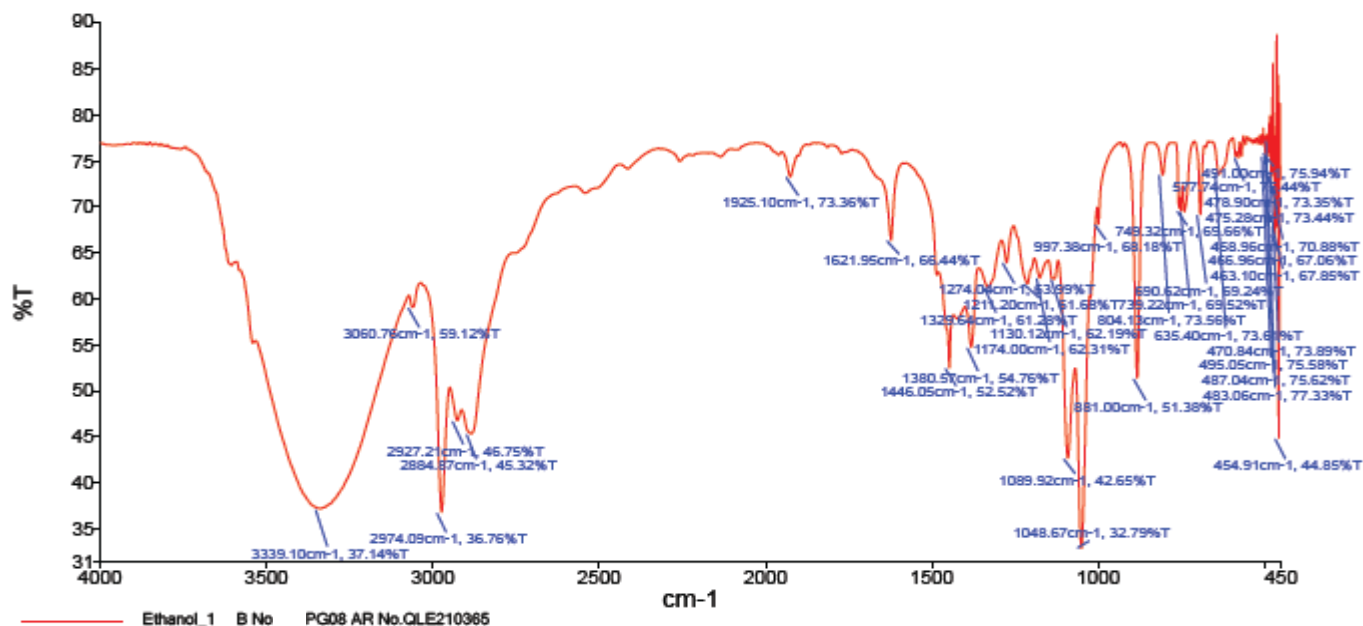
*This is a computer-generated report -does not required sign*

Worldwide Helpline No. 1800-120-1234-34 , Email: [info@pure-synth.com](mailto:info@pure-synth.com) , Website: [www.pure-synth.com](http://www.pure-synth.com)

**Infrared spectrum:**

**Product Name: PurSol**

**Product Code: PSR28298**



Source Spectra Results		
Spectrum Name	Number Of Peaks	
Ethanol_1	35	
List of Peak Area/Height		
Peak Number	X (cm-1)	Y (%T)
1	3339.10	37.14
2	3060.76	59.12
3	2974.09	36.76
4	2927.21	46.75
5	2884.87	45.32
6	1925.10	73.36
7	1621.95	66.44
8	1446.05	52.52
9	1380.57	54.76
10	1329.64	61.28
11	1274.04	63.99
12	1211.20	61.68
13	1174.00	62.31
14	1130.12	62.19
15	1089.92	42.65
16	1048.67	32.79
17	997.38	68.18
18	881.00	51.38
19	804.13	73.56
20	749.32	69.66
21	739.22	69.52
22	690.62	69.24
23	635.40	73.61
24	577.74	75.44
25	495.05	75.58
26	491.00	75.94
27	487.04	75.62
28	483.06	77.33
29	478.90	73.35
30	475.28	73.43
31	470.84	73.89
32	466.96	67.06
33	463.10	67.85
34	458.96	70.88
35	454.91	44.85

**Identification by IR: Conforms to structure**

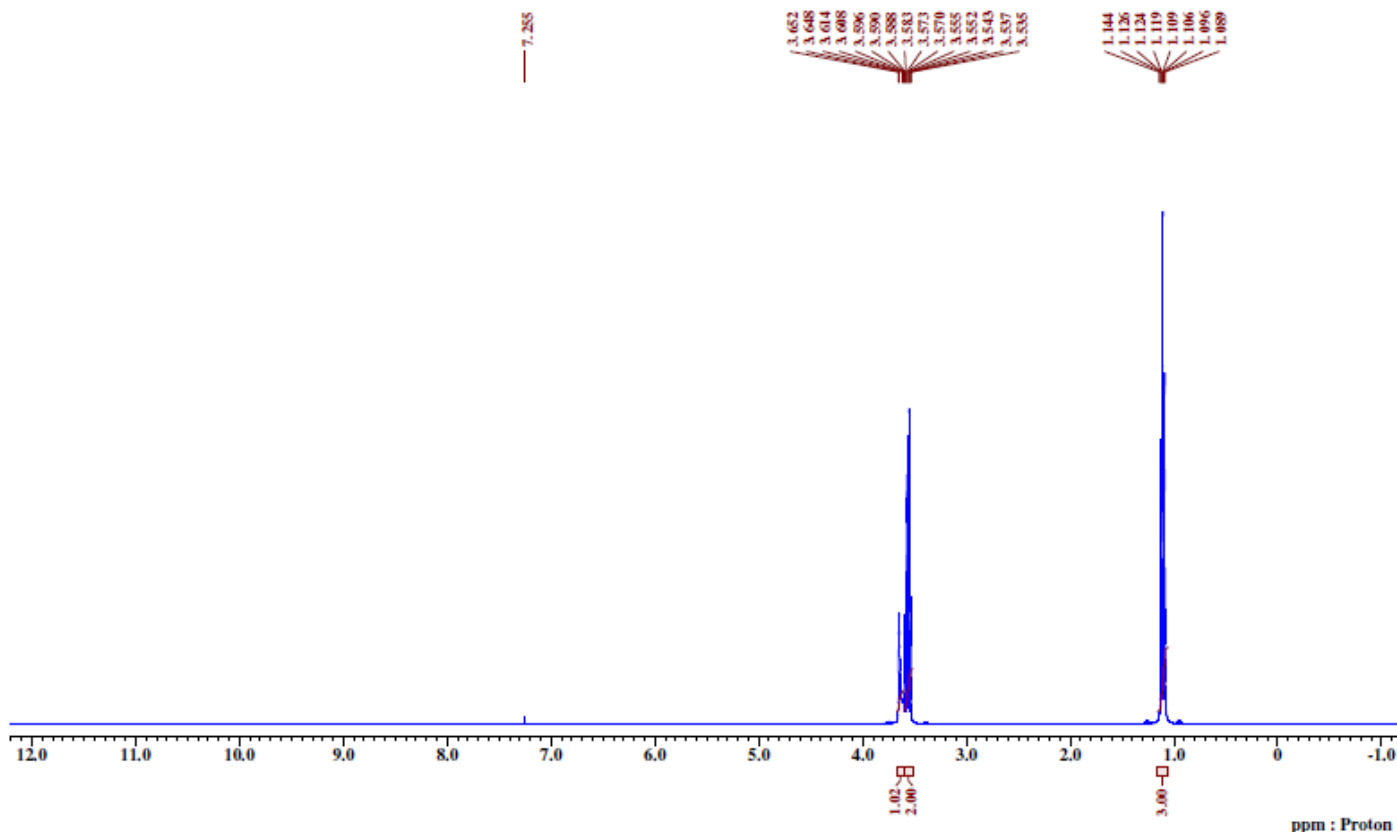
*This is a computer-generated report -does not required sign*

Worldwide Helpline No. 1800-120-1234-34 , Email: [info@pure-synth.com](mailto:info@pure-synth.com) , Website: [www.pure-synth.com](http://www.pure-synth.com)

**<sup>1</sup>H NMR Spectrum:**

**Product Name: PurSol**

**Product Code: PSR28298**



Sample_Id = Etanol :LPG08	Instrument = JNM-ECX400s/L1	Scans = 16
Author = delta	Spectrometer = proton_auto.jpg	Temp_Get = 19.1[dc]
Operated by = Vishnu	X_Domain = Proton	X_Acq_Time = 1.16916224[s]
Creation_Time = 24-NOV-2021 10:50:27	Dir_Title = Proton	Relaxation_Delay = 5[s]
Revision_Time = 24-NOV-2021 11:12:20	Solvent = CHLOROFORM-D	Exp_Total = 106[s]
Experiment Details		

**Identification by <sup>1</sup>H NMR: Conforms to structure**

**Maximum limits of impurities**

**WATER DETERMINATION**

Method: Karl Fisher titration

Water Content (PSR28298) = **0.1495 %**

Approved By  
Head - Technical

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

Worldwide Helpline No. 1800-120-1234-34 , Email: [info@pure-synth.com](mailto:info@pure-synth.com) , Website: [www.pure-synth.com](http://www.pure-synth.com)