

Certificate of Analysis

Product Name:

Isopropyl alcohol (2-propanol) PurTech Standard for GC
[Includes all characterization data]
(Secondary Reference Standard)

Product No.: PSI050
Lot No.: Sample COA
Brand: PureSynth
CAS No.: 67-63-0
Molecular Formula: C₃H₈O
Molecular Weight: 60.11 g/mol
Date of Mfg.: NA
Date of Exp.: NA

Test	Specification	Result
Appearance	Colorless liquid	Colorless Liquid
Purity 1 (GC-FID)	≥ 99.0 %	99.99 %
Purity 2 (GC-FID)	≥ 99.0 %	99.97 %
Purity 3 (GC-FID)	≥ 99.0 %	99.99 %
Average Purity (GC-FID)	≥ 99.0 %	99.98 %
Water (By KF)	NMT 0.050 %	0.043%
Density	0.75-0.80 g/cm ³	0.78 g/cm ³
Potency	-	99.94 %
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 1570428, Lot No: R048P0**

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PURITY 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

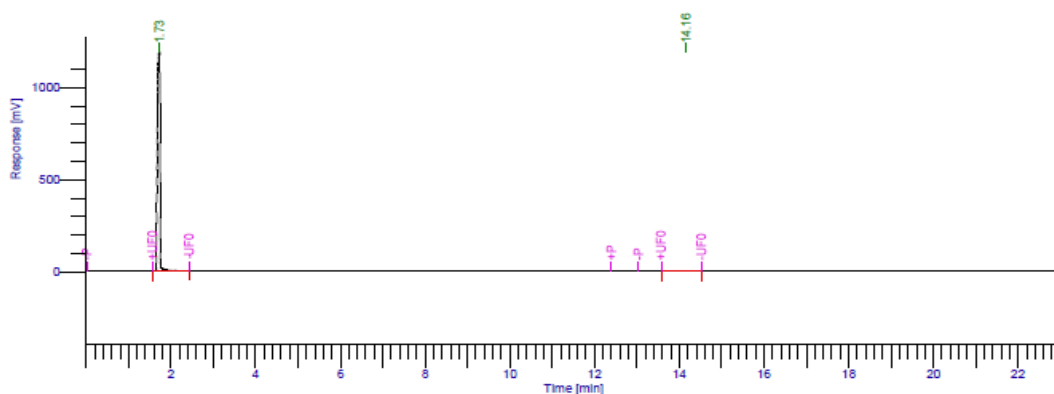
Temp programming: Initial 50°C hold for 1min, 5° C Ramp/ min., 100 °C hold for 1 min., 25°C Ramp up to 250°C hold for 2 min., Run time 20 min.

Software Version : 6.3.4.0700
Operator : manager
Sample Number : 001
AutoSampler : BUILT-IN
Instrument Name : Clarus 690
Instrument Serial # : 690S23050206
Delay Time : 0.00 min
Sampling Rate : 12.5000 pts/s
Sample Volume : 1.000000 ul
Sample Amount : 1.0000

Sample Name : ISOPROPYLALCOHOL

Study :
Rack/Vial : 0/30
Channel : A
A/D mV Range : 1000
End Time : 23.00 min

Area Reject : 0.000000
Dilution Factor : 1.00
Cycle : 1



GC Reports

Peak #	Component Name	Time [min]	Area [uV*sec]	Height [uV]	Area [%]
1		1.728	5267647.82	1.24e+06	99.99
2		14.157	610.35	17.61	0.01
		5268258.17	1.24e+06	100.00	

Warning -- Signal level out-of-range in peak

Missing Component Report
Component Expected Retention (Calibration File)

All components were found

Purity by GC_1: 99.99 %

Purity by GC_2*: 99.97 %

Purity by GC_3*: 99.99 %

*Purity spectra will be provided in LOT COA.

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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

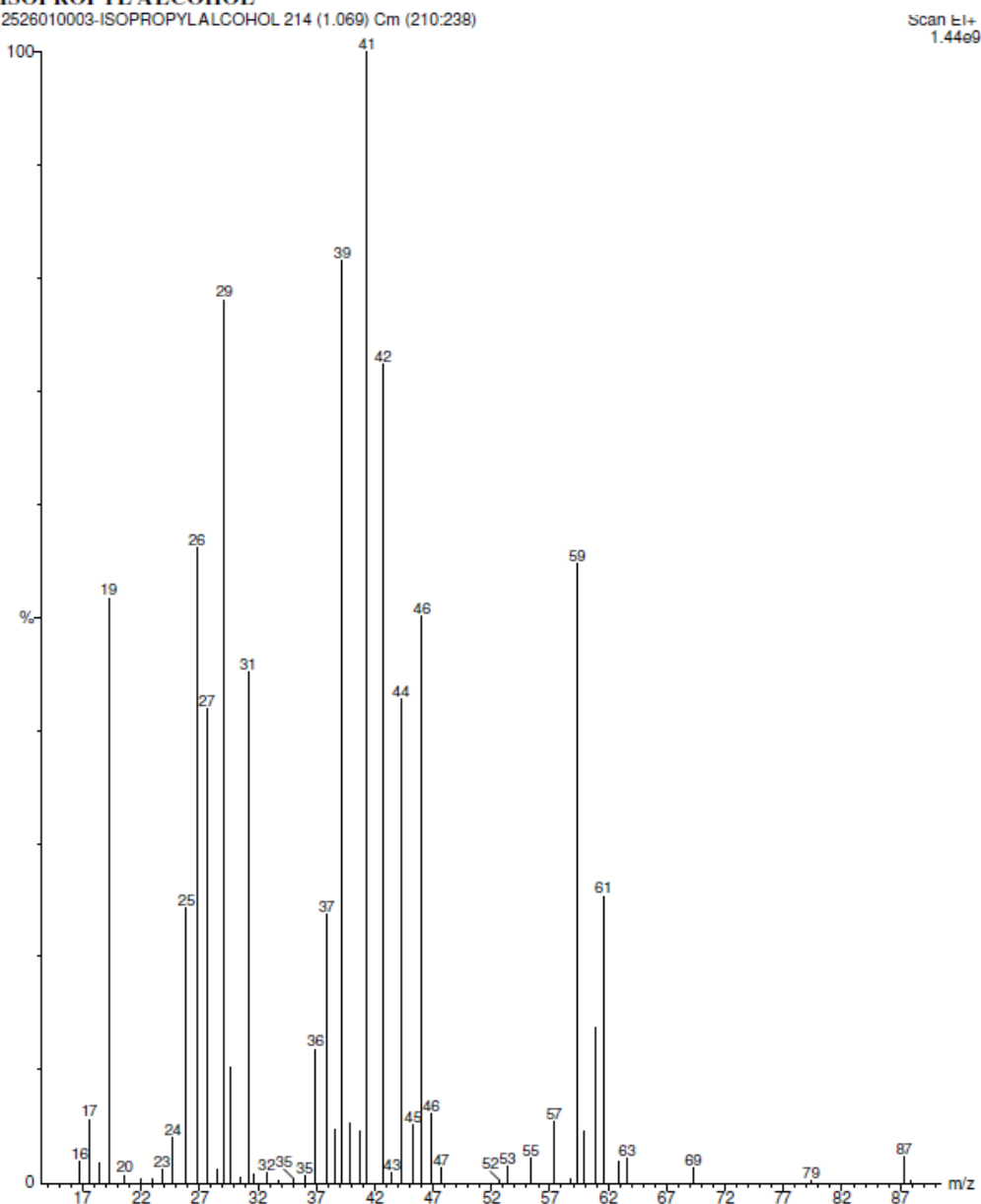
Source Temp.: 230°C, Transfer line: 250°C

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

Source energy: 70eV

ISOPROPYL ALCOHOL

2526010003-ISOPROPYLALCOHOL 214 (1.069) Cm (210:238)



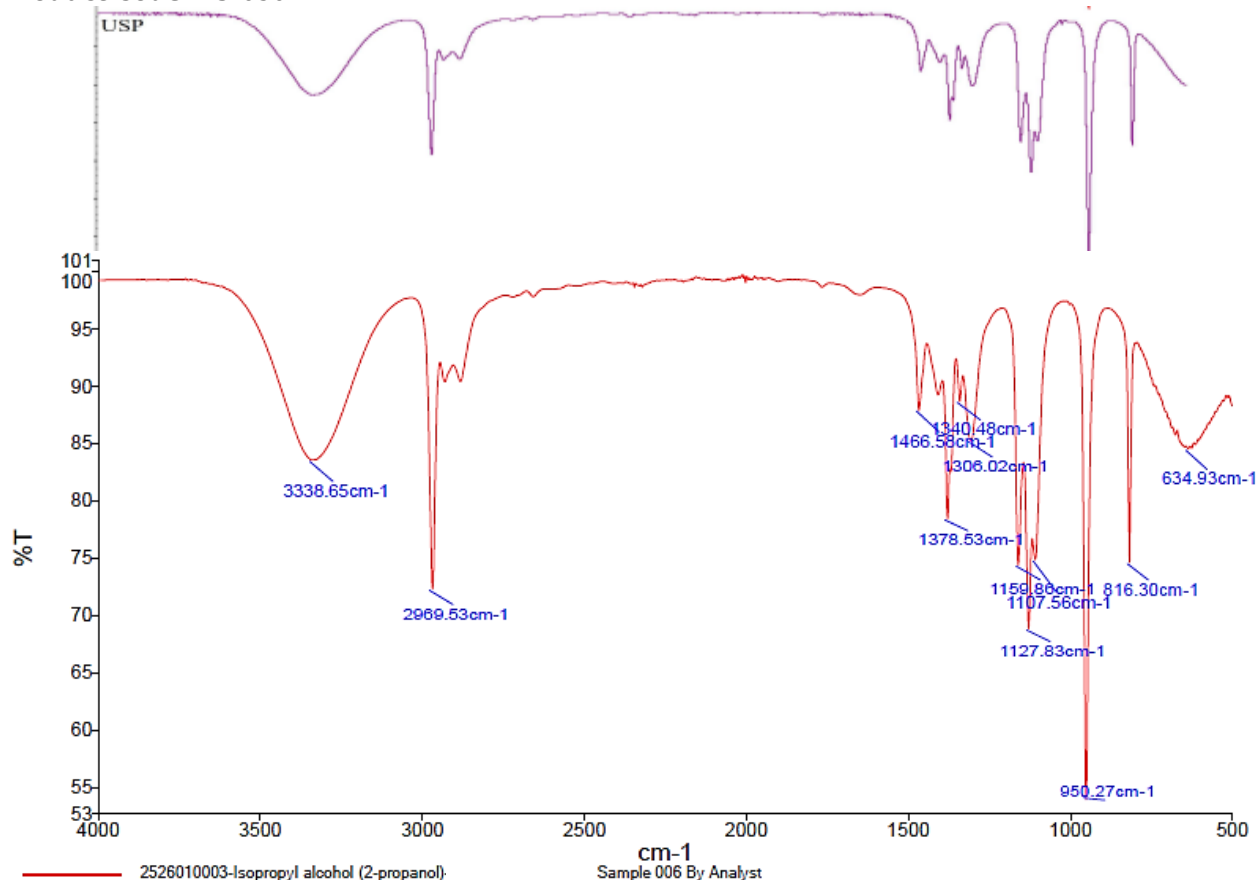
Identification by GC-MS: Conforms to molecular mass

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Infrared spectrum:

Product Name: Isopropyl alcohol
Product Code: PSI050



Source Spectra Results		
Spectrum Name	Number Of Peaks	
2526010003-Isopropyl alcohol (2-propanol)-	12	
List of Peak Area/Height		
Peak Number	X (cm-1)	Y (%T)
1	3338.65	83.56
2	2969.53	72.30
3	1466.58	87.94
4	1378.53	78.45
5	1340.48	88.68
6	1306.02	85.27
7	1159.86	74.42
8	1127.83	68.84
9	1107.56	74.87
10	950.27	53.88
11	816.30	74.63
12	634.93	84.52

Identification by IR: Conforms to structure

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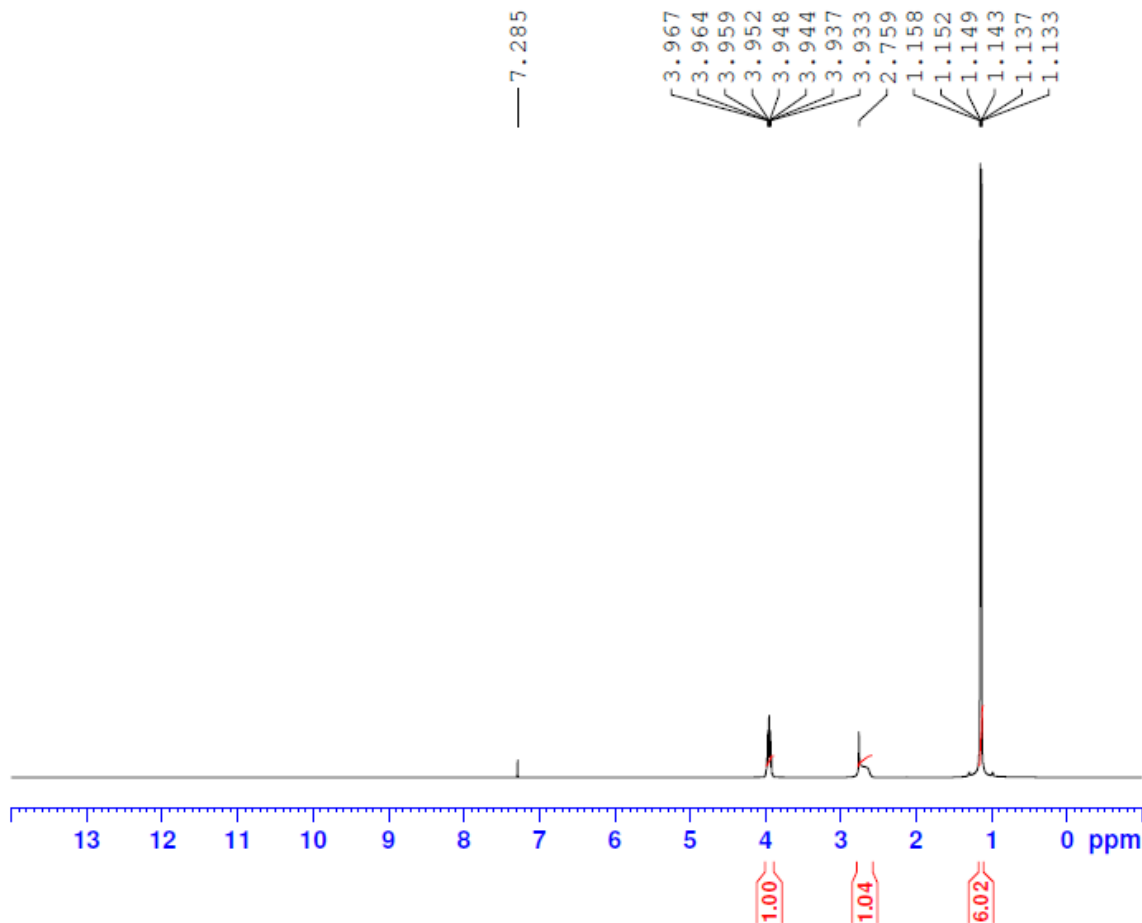
¹H NMR Spectrum:

Product Name: Isopropyl alcohol

Product Code: PSI050

Isopropyl alcohol (2-propanol)

¹H-NMR in CDCl₃



Identification by ¹H NMR: Conforms to structure

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Maximum limits of impurities

WATER DETERMINATION

Method: Karl Fisher titration

Water Content (PSI050) = **0.043 %**

Remarks:

This is to certify that the mentioned batch has been analysed at the time of quality release and has been found to be in compliance with prescribed specifications

The current Specification sheet may be available at www.pure-synth.com

Inspect on receipt

Storage Condition:

Store at room temperature and keep the container tightly closed

PureSynth Research Chemicals GmbH

This is electronically-generated copy & is valid without a signature

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