

Certificate of Analysis

2-Chloroethanol

PurCert Standard for GC

Product Number	PSR41342	CAS No.	110-83-8
Brand	PureSynth	Lot No.	C41342L1224
Molecular Formula	C ₂ H ₅ ClO	Date of Mfg.	December,2024
Molecular Weight	80.51 g/mol	Date of Exp.	November,2027

Test	Specification	Result
Description	Colorless liquid	Colorless liquid
Assay (GC-FID)	≥ 99.5 %	99.93 %
Water (By KF)	NMT 0.1 %	0.083 %
Density	1.200 - 1.204 g/cm ³	1.201 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.

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Toll free No. 1800-8908-260, Email: info@pure-synth.com , Website: www.pure-synth.com

Assay by GC-FID

METHOD: GC- FID conditions:

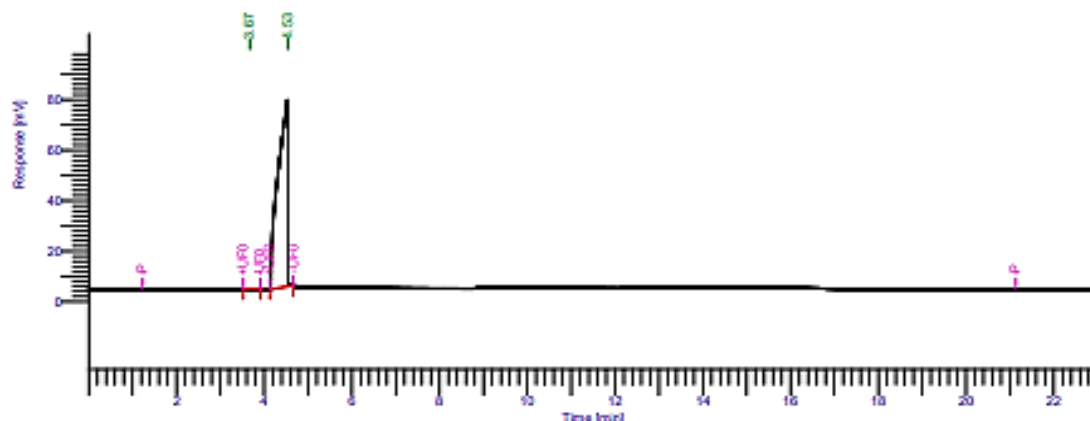
Column: Agilent Technologies DB-FFAP 30mx 0.530mm, 1.0micron

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	: 13-01-2025 13:45:47
Operator	: manager	Sample Name	: 2-CHLOROETHANOL
Sample Number	: 001	Study	:
AutoSampler	: BUILT-IN	Rack/Vial	: 0/33
Instrument Name	: Clarus 690	Channel	: A
Instrument Serial #	: None	A/D mV Range	: 1000
Delay Time	: 0.00 min	End Time	: 23.00 min
Sampling Rate	: 12.5000 pts/s	Area Reject	: 0.000000
Sample Volume	: 1.000000 ul	Dilution Factor	: 1.00
Sample Amount	: 1.0000	Cycle	: 1
Data Acquisition Time	: 13-01-2025 12:09:35		



GC Reports

Peak #	Component Name	Time [min]	Area [uV*sec]	Height [uV]	Area [%]
1		3.669	797.98	69.59	0.07
2		4.535	1137294.77	73971.08	99.93
			1138092.75	74040.67	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:

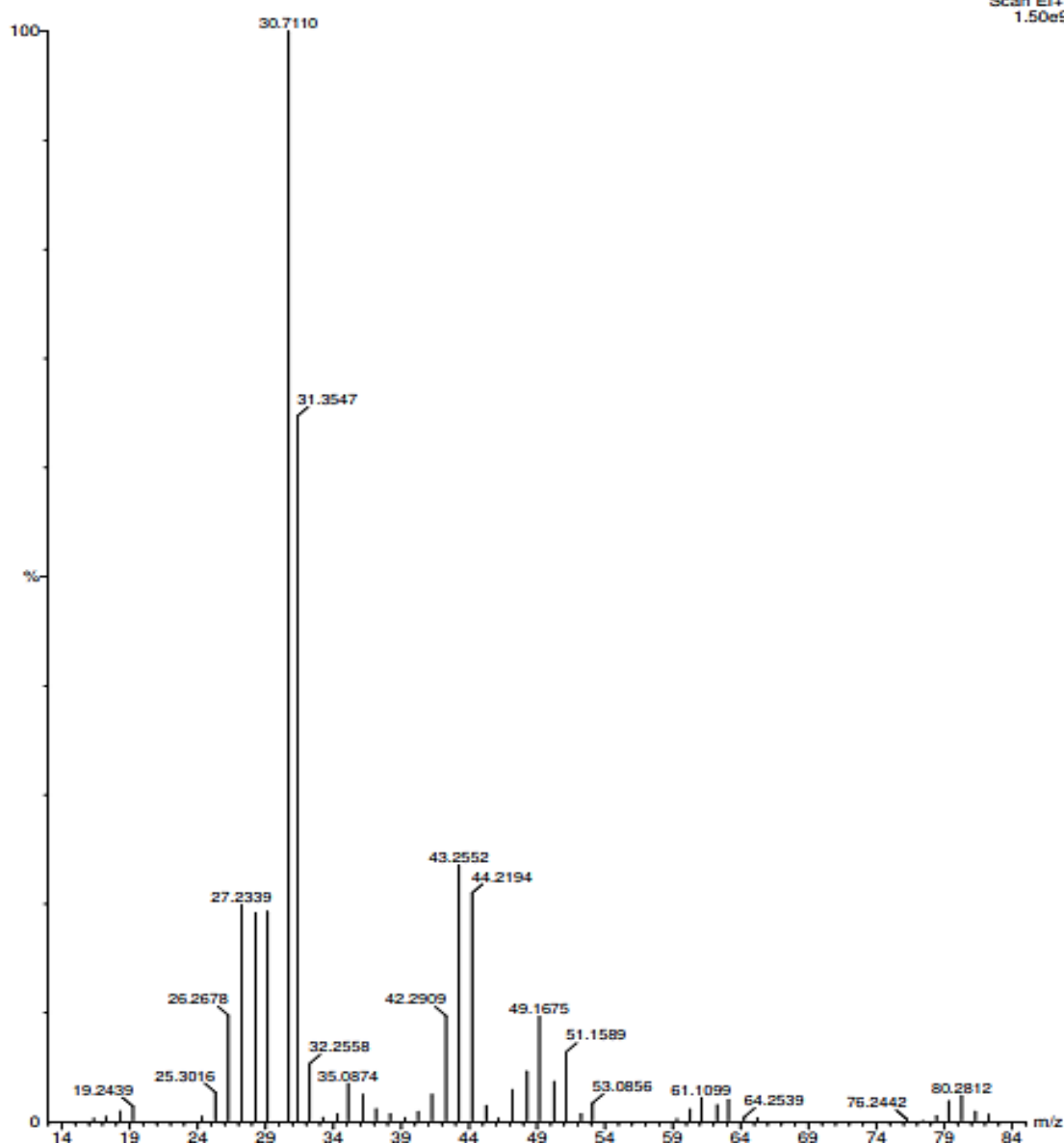
Product Name: 2-Chloroethanol

Product Code: PSR41342

2-CHLOROETHANOL

, 13-Jan-2025 + 12:21:41

Scan EI+
1.50e9



Identification by GC-MS: Conforms to molecular mass

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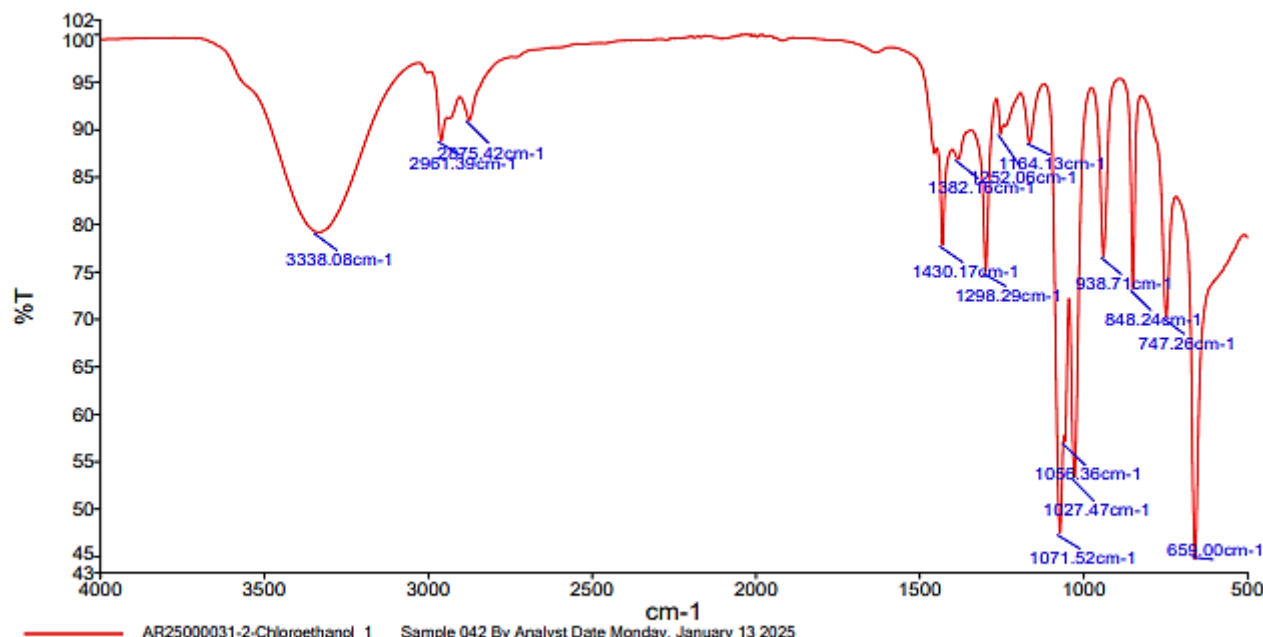
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Infrared spectrum:

Product Name: 2-Chloroethanol

Product Code: PSR41342

Analyst
Date



Source Spectra Results		
Spectrum Name		Number Of Peaks
AR25000031-2-Chloroethanol_1		15
List of Peak Area/Height		
Peak Number	X (cm-1)	Y (%T)
1	3338.08	79.20
2	2961.39	88.88
3	2875.42	91.07
4	1430.17	77.85
5	1382.16	86.92
6	1298.29	75.01
7	1252.06	89.61
8	1164.13	88.67
9	1071.52	47.42
10	1056.36	57.09
11	1027.47	53.36
12	938.71	76.68
13	848.24	73.20
14	747.26	70.21
15	659.00	44.71

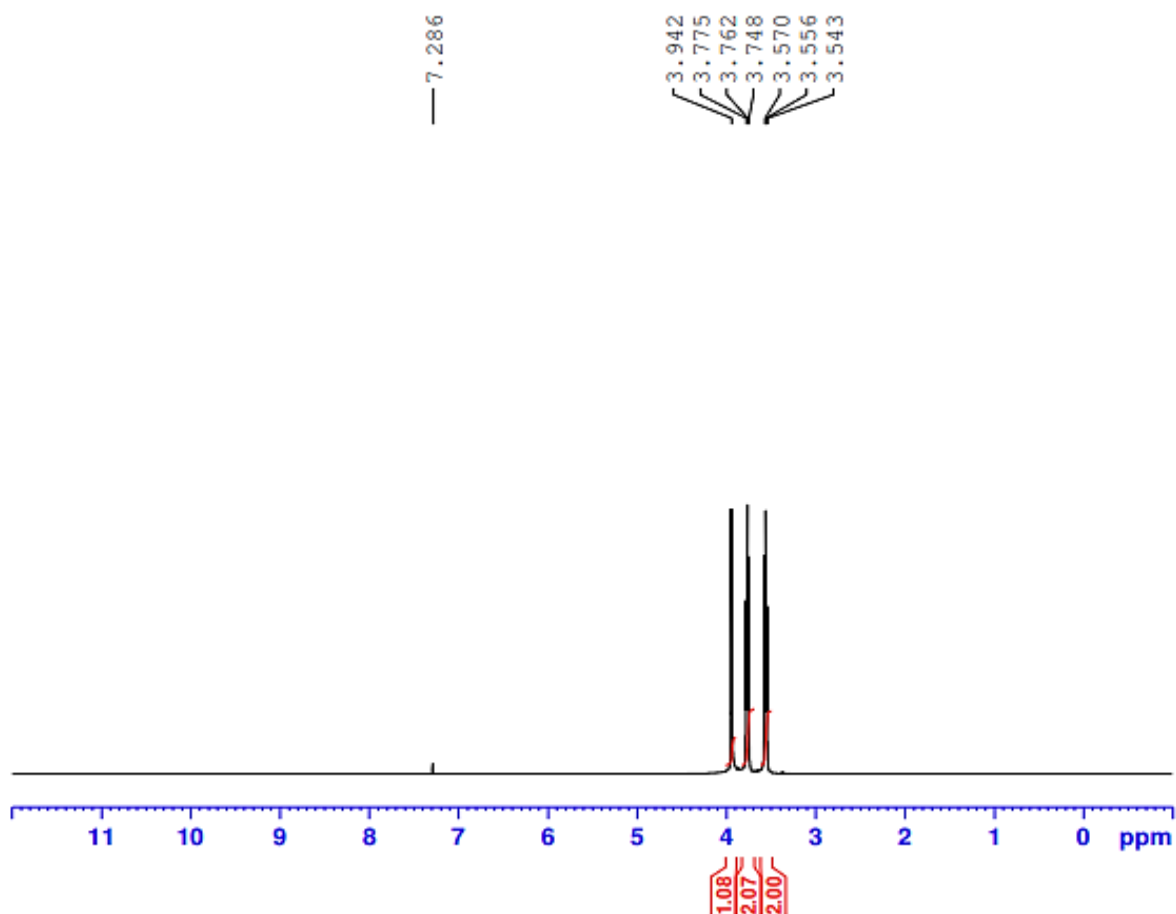
Identification by IR: Conforms to structure

¹H NMR Spectrum:

Product Name: 2-Chloroethanol

Product Code: PSR41342

2-Chloroethanol
1H-NMR in CDCL₃



Identification by ¹H NMR: Conforms to structure

Maximum limits of impurities

WATER DETERMINATION

Method: Karl Fisher titration

Water Content (PSR41342) = **0.083 %**

Approved By
Head - Technical

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