

Certificate of Analysis

Ethylene oxide 1M in MeOH

PurCert Standard for GC

Product Number	PSR46293	CAS No.	75-21-8
Brand	PureSynth	Lot No.	E46293SY0325
Molecular Formula	C ₂ H ₄ O	Date of Mfg.	March,2025
Molecular Weight	44.05 g/mol	Date of Exp.	February,2030

Test	Specification	Result
Description	Colorless to yellow to brown Liquid	Complies
Assay (GC-FID)	≥ 99.0 %	99.97 %
Concentration	~ 1.0 M	1.05 M
Water (By KF)	NMT 0.500 %	0.397 %
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.

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

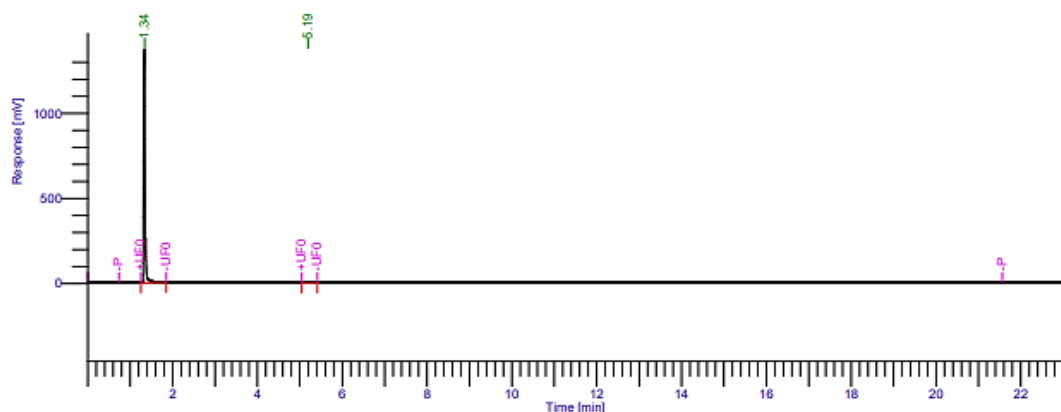
Temp programming: Initial 50°C hold for 1min, 5° C Ramp/ min., 100 °C hold for 1 min., 25°C Ramp up to 250°C hold for 2 min., Run time 20 min.

Software Version : 6.3.4.0700
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
Data Acquisition Time : 21-04-2025 15:58:59

Date : 21-04-2025 17:21:16
Sample Name : ETHYLENE OXIDE 1M IN MeOH-E462
93SY0325

Study :
Rack/Vial : 0/18
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		1.339	3487015.39	1.37e+06	99.97
2		5.192	931.99	73.85	0.03
			3487947.38	1.37e+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-FID: 99.97 %

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:

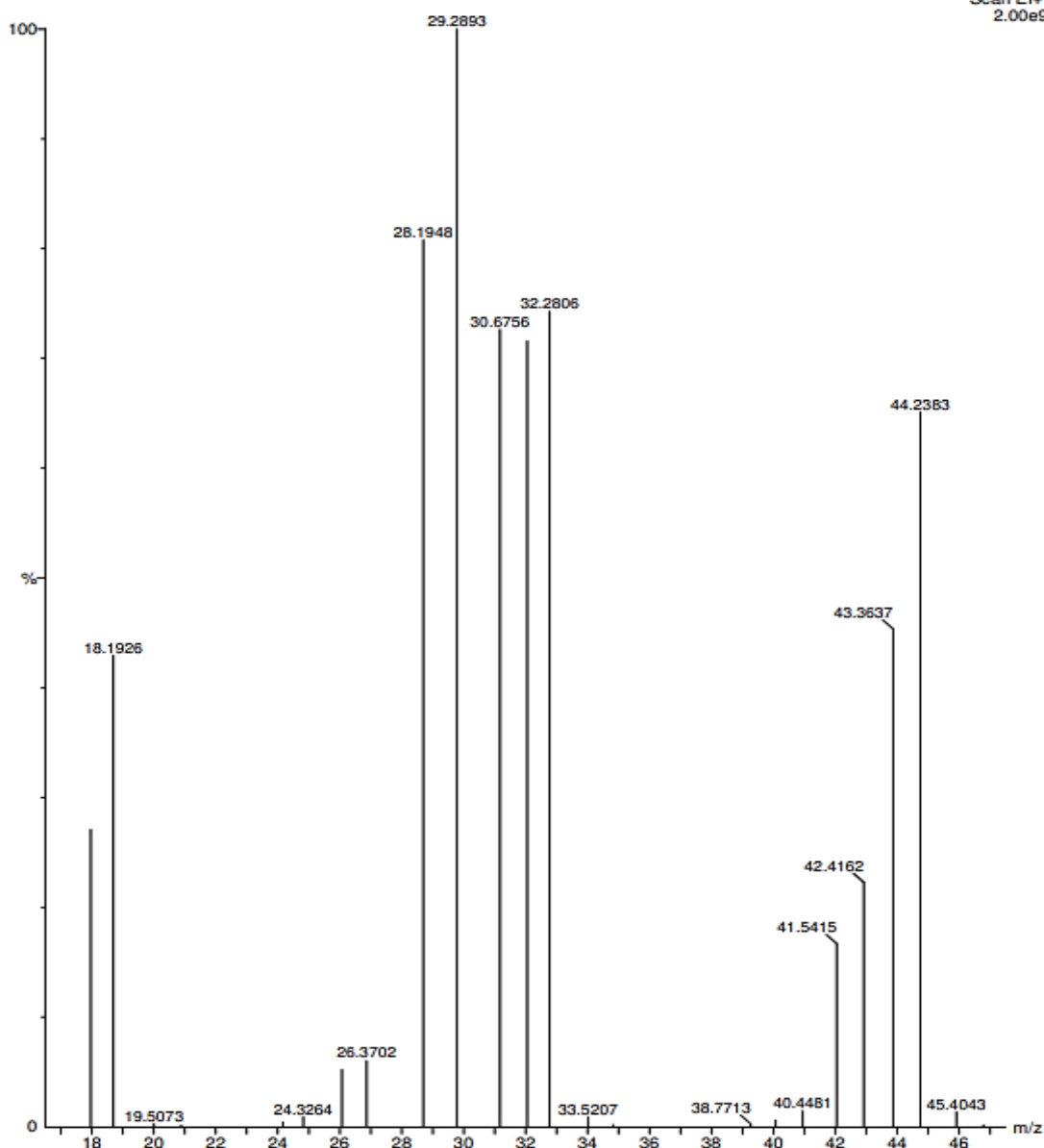
Product Name: Ethylene oxide 1M in MeOH

Product Code: PSR46293

ETHYLENE OXIDE 1M IN MeOH-E46293SY0325

, 22-Apr-2025 + 09:56:22

Scan EI+
2.00e9



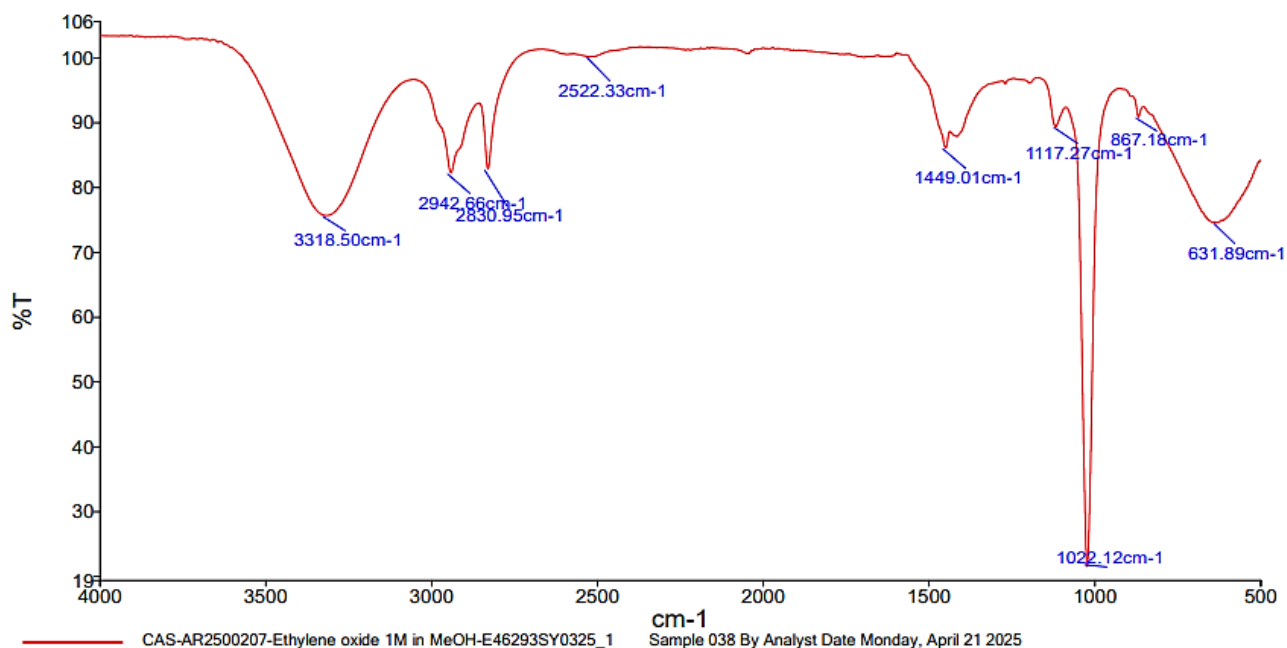
Identification by GC-MS: Conforms to molecular mass

Infrared spectrum:

Product Name: Ethylene oxide 1M in MeOH

Product Code: PSR46293

Analyst
Date



Source Spectra Results		
Spectrum Name		Number Of Peaks
CAS-AR2500207-Ethylene oxide 1M in MeOH-E46293SY0325_1		9
List of Peak Area/Height		
Peak Number	X (cm-1)	Y (%T)
1	3318.50	75.73
2	2942.66	82.30
3	2830.95	82.92
4	2522.33	100.25
5	1449.01	86.18
6	1117.27	89.47
7	1022.12	21.48
8	867.18	90.94
9	631.89	74.61

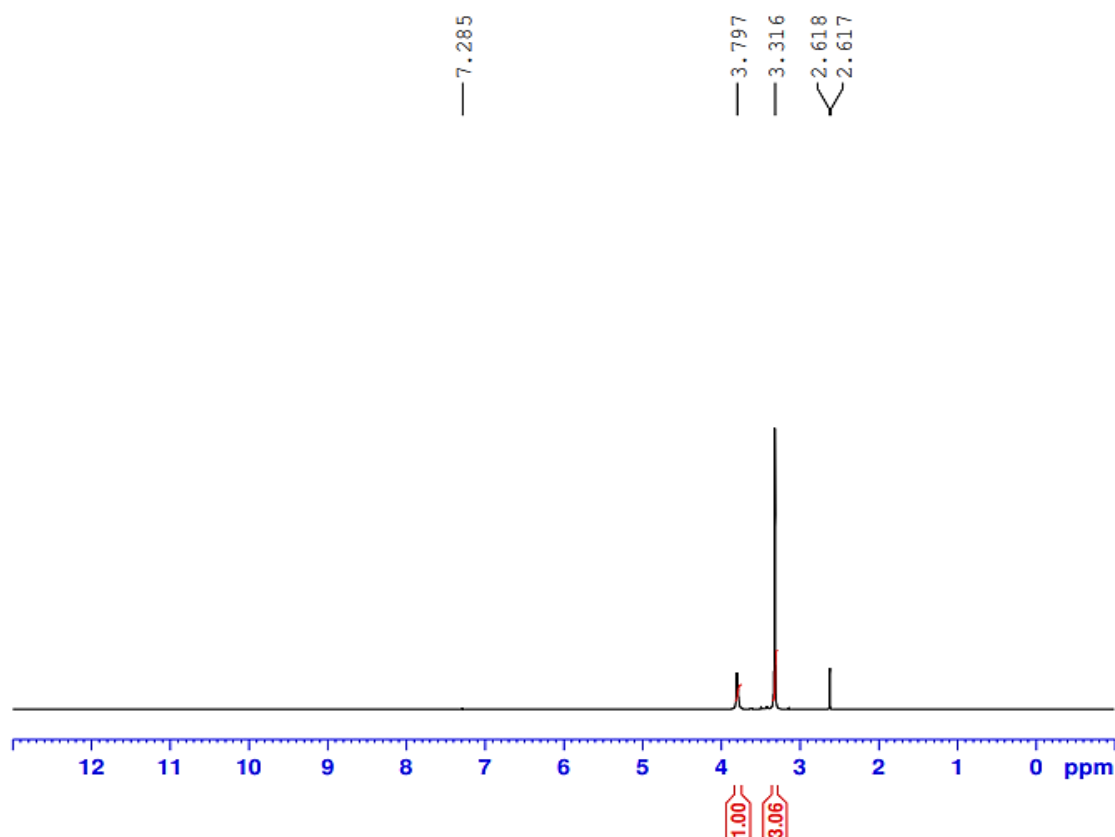
Identification by IR: Conforms to structure

¹H NMR Spectrum:

Product Name: Ethylene oxide 1M in MeOH

Product Code: PSR46293

Ethylene oxide 1M in MeOH
B.No : E46293SY0325
¹H-NMR in CDCL₃



Identification by ¹H NMR: Conforms to structure

Maximum limits of impurities

WATER DETERMINATION

Method: Karl Fisher titration

Water Content (PSR46293) = **0.397 %**

Approved By
Head - Technical

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