

Certificate of Analysis

(±)-Epichlorohydrin

PurTech Standard for GC

Product Number	PSI086	CAS No.	106-89-8
Brand	PureSynth	Lot No.	E28359
Molecular Formula	C ₃ H ₅ ClO	Date of Mfg.	July,2023
Molecular Weight	92.52 g/mol	Date of Exp.	June,2027

Test	Specification	Result
Description	Colorless liquid	Colorless liquid
Assay (GC-FID)	≥ 99.5 %	99.99 %
Water (By KF)	NMT 0.0500 %	0.0387 %
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 and keep the container tightly closed.

Remark: The batch complies with the prescribed quality of the above specification.

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Assay by GC-FID

METHOD: GC- FID conditions:

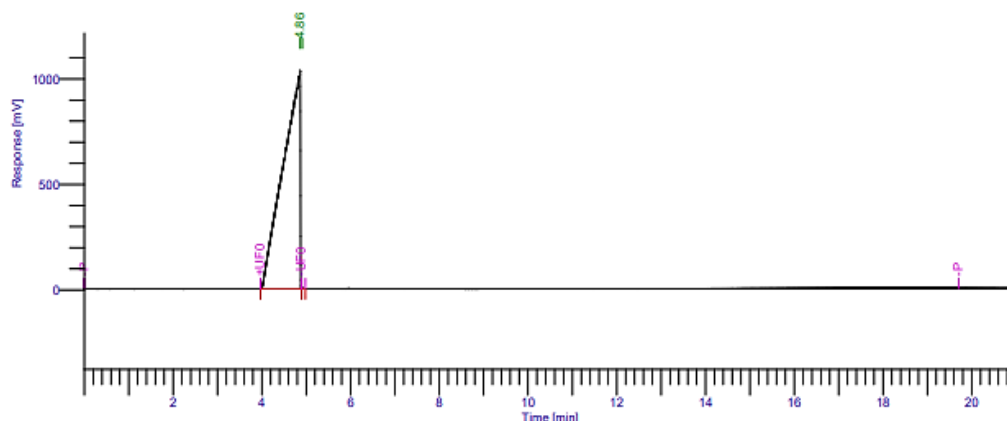
Column: Agilent Technologies DB-FFAP 30mx 0.530mm, 1.0micron

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	: 29-10-2023 11:29:32
Operator	: manager	Sample Name	: EPICHLOROHYDRIN-E28359
Sample Number	: 001	Study	:
AutoSampler	: BUILT-IN	Rack/Vial	: 0/31
Instrument Name	: Clarus 690	Channel	: A
Instrument Serial #	: None	A/D mV Range	: 1000
Delay Time	: 0.00 min	End Time	: 21.00 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	: 29-10-2023 11:04:08	Cycle	: 1



GC Reports

Peak #	Component Name	Time [min]	Area [uV*sec]	Height [uV]	Area [%]
1		4.864	27572559.78	1.03e+06	99.99
2		4.912	2199.43	1728.51	0.01
			27574759.21	1.04e+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: 99.99 %

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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

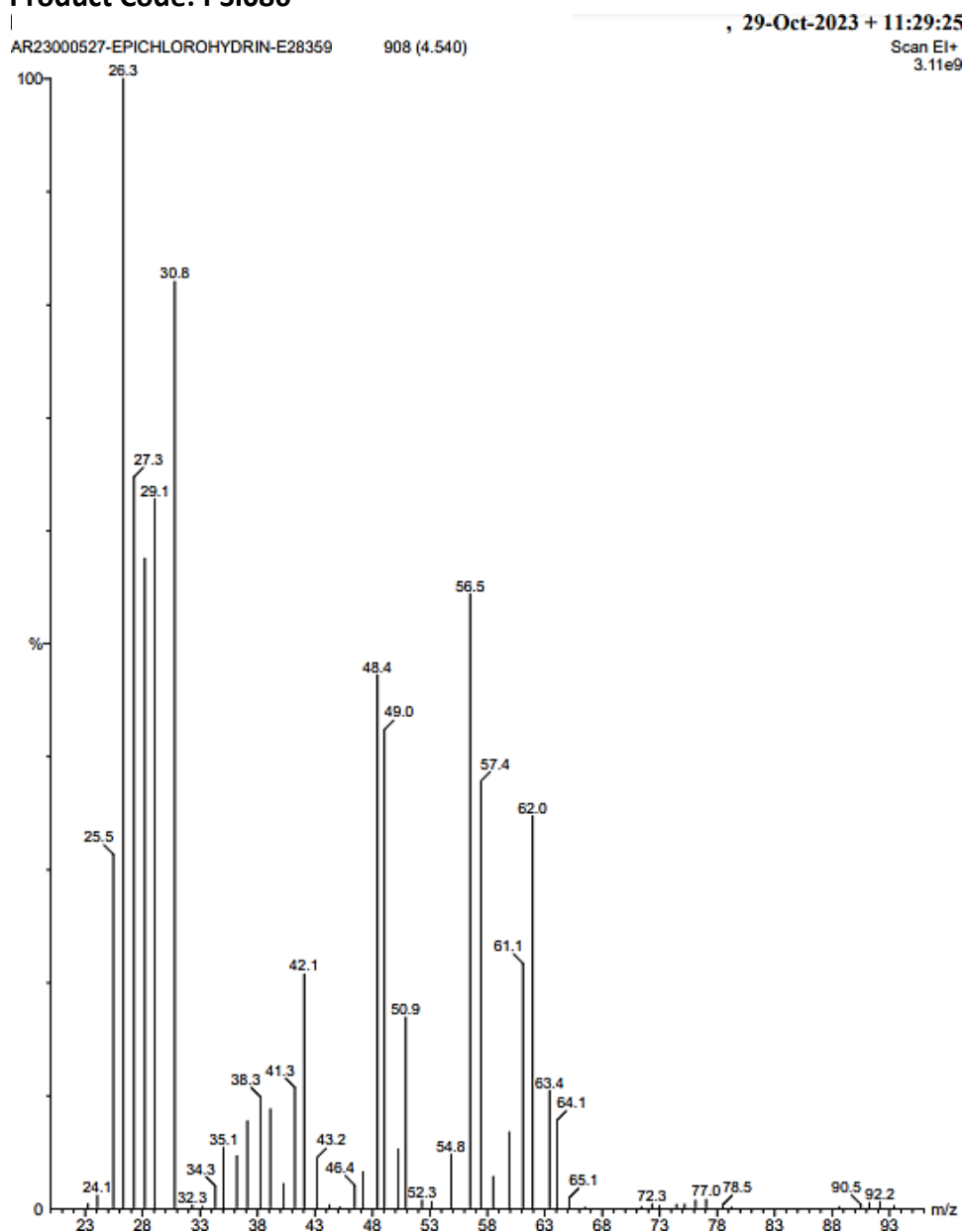
Inlet Temp.: 180°C, **Diluent:** Methanol

Source energy: 70eV

Mass by GC-MS:

Product Name: (±)-Epichlorohydrin

Product Code: PSI086



Identification by GC-MS: Conforms to molecular mass

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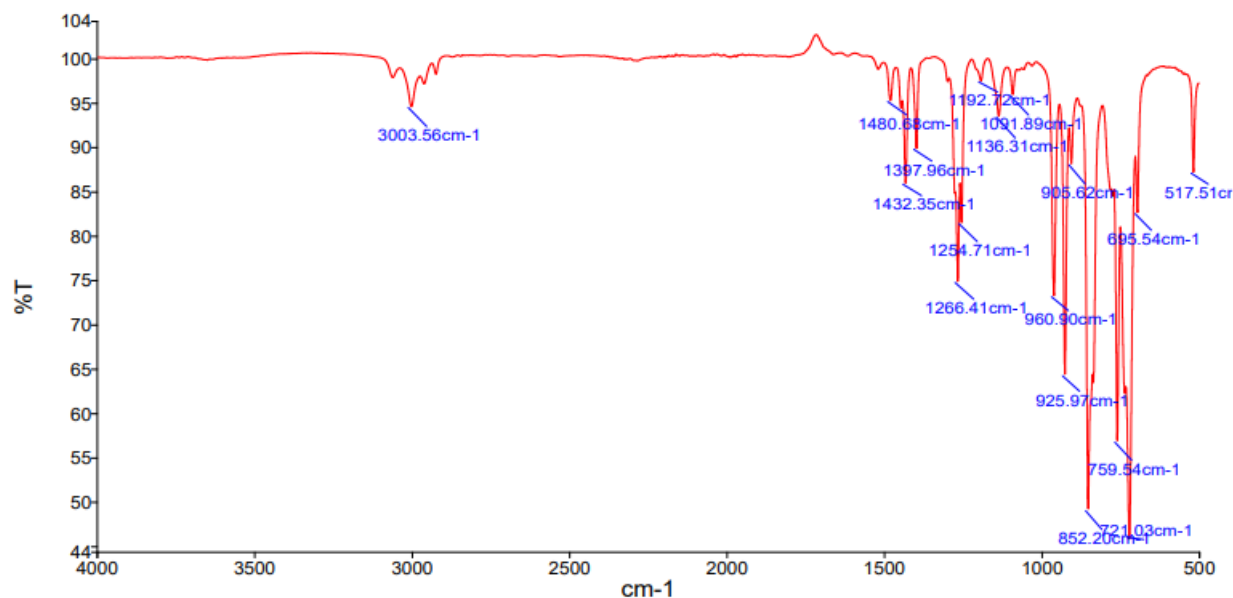
Infrared spectrum:

Product Name: (±)-Epichlorohydrin

Product Code: PSI086

Analyst

Date



Source Spectra Results		
Spectrum Name		Number Of Peaks
AR23000132-(±)-Epichlorohydrin-E28359 _1		17
List of Peak Area/Height		
Peak Number	X (cm-1)	Y (%T)
1	3003.56	94.70
2	1480.68	95.37
3	1432.35	86.04
4	1397.96	89.97
5	1266.41	74.94
6	1254.71	81.58
7	1192.72	97.59
8	1136.31	93.60
9	1091.89	96.05
10	960.90	73.33
11	925.97	64.44
12	905.62	88.24
13	852.20	49.22
14	759.54	56.94
15	721.03	45.81
16	695.54	82.71
17	517.51	87.29

Identification by IR: Conforms to structure

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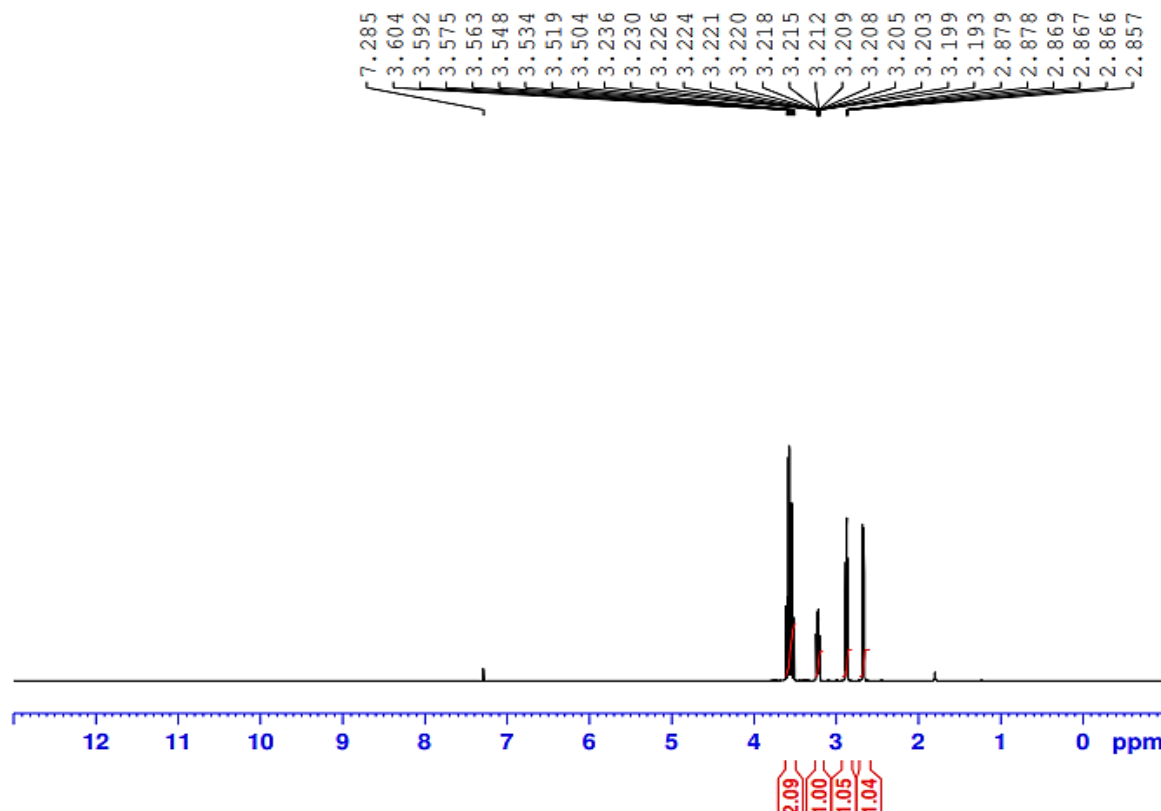
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¹H NMR Spectrum:

Product Name: (±)-Epichlorohydrin

Product Code: PSI086

(+/-)-Epichlorohydrin
B.No.E28359
1-HNMR in CDCl₃



Identification by ¹H NMR: Conforms to structure

Maximum limits of impurities

WATER DETERMINATION

Method: Karl Fisher titration

Water Content (PSI086) = **0.0387 %**

Approved By
Head - Technical

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