PureSynth
Research Chemicals

Certificate of Analysis

Dichloromethane

PurTech Standard for GC

(Secondary Reference Standard)

Product Number	PSI032	**CAS No.**	75-09-2
Brand	PureSynth	**Lot No.**	D28277H
Molecular Formula	CH_2Cl_2	**Date of Mfg.**	Febraury.2024
Molecular Weight	84.93 g/mol	**Date of Exp.**	January.2027

Test	Specification	Result
Description	Colorless liquid	Colorless liquid
Assay (GC-FID)	≥ 99.5 %	99.72 %
Non-volatile matter	<0.0005 %	<0.0005 %
Water (By KF)	NMT 0.0500 %	0.0419 %
Density	1.32-1.35 g/cm^3	1.33 g/cm^3
Identification by ^{1}H NMR	Conforms to structure	Conforms
Identification by GC-MS	Conform to molecular	Conforms
Identification by IR	Conforms to structure	Conforms

***Traceable to USP Reference Standard 1601441, Lot No: R08150**

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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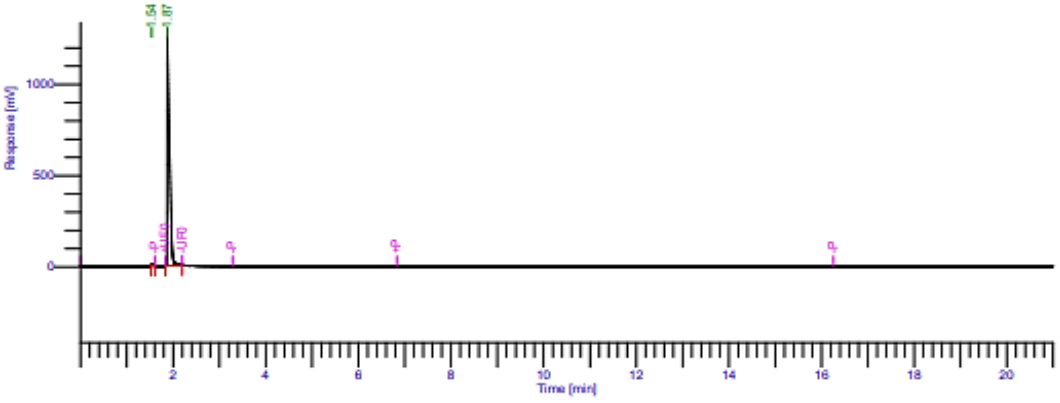
Assay by GC-FID

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	: 23-04-2024 16:33:22
Operator	: manager	Sample Name	: Dichloromethane-D28277H
Sample Number	: 001	Study	:
AutoSampler	: BUILT-IN	Rack/Vial	: 0/21
Instrument Name	: Clarus 690	Channel	: A
Instrument Serial #	: 690S23050206	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		
Sample Amount	: 1.0000	Area Reject	: 0.000000
Data Acquisition Time	: 23-04-2024 11:46:39	Dilution Factor	: 1.00
		Cycle	: 1



GC Reports

Peak #	Component Name	Time [min]	Area [uV*sec]	Height [uV]	Area [%]
1		1.538	12481.52	9580.92	0.28
2		1.873	4462803.24	1.29e+06	99.72
			4475284.76	1.30e+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: 99.72 %

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IDENTIFICATION TESTS

GC-MS Spectrum:

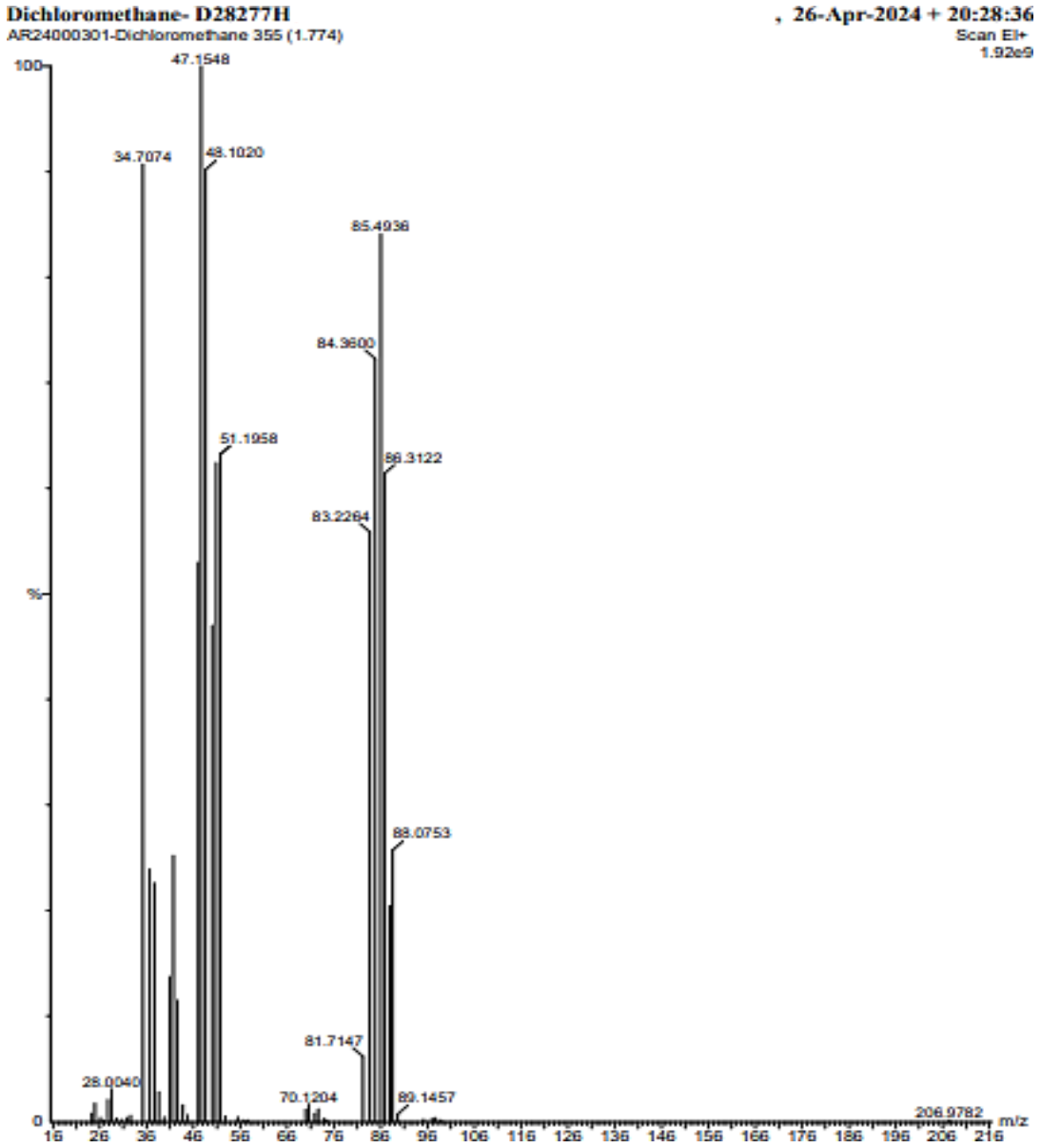
METHOD: G.C-MS conditions:

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: Dichloromethane

Product Code: PSI032

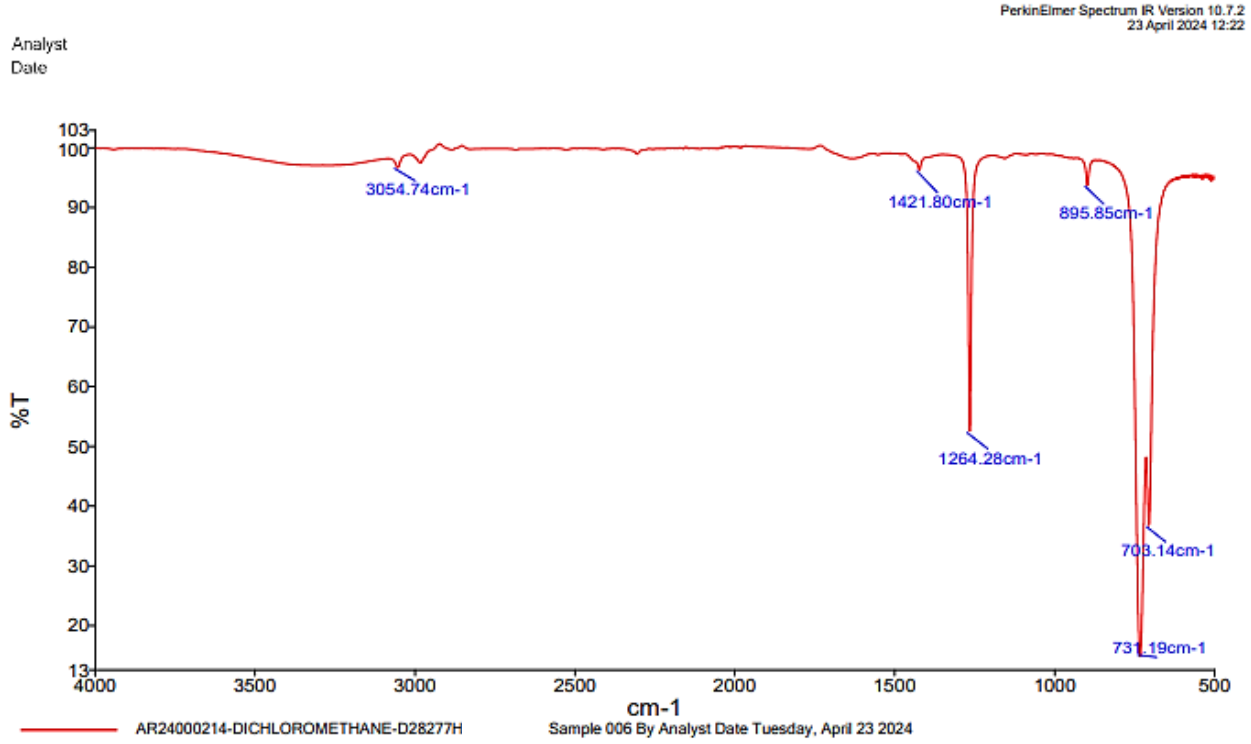


Identification by GC-MS: Conform to molecular

Infrared spectrum:

Product Name: Dichloromethane PurCert Standard for GC

Product Code: PSI032



Source Spectra Results	
Spectrum Name	Number Of Peaks
AR24000214-DICHLOROMETHANE-D28277H0224_1	6

List of Peak Area/Height		
Peak Number	X (cm-1)	Y (%T)
1	3054.74	96.78
2	1421.80	96.35
3	1264.28	52.55
4	895.85	93.77
5	731.19	14.74
6	703.14	36.77

Identification by IR: Conforms to structure

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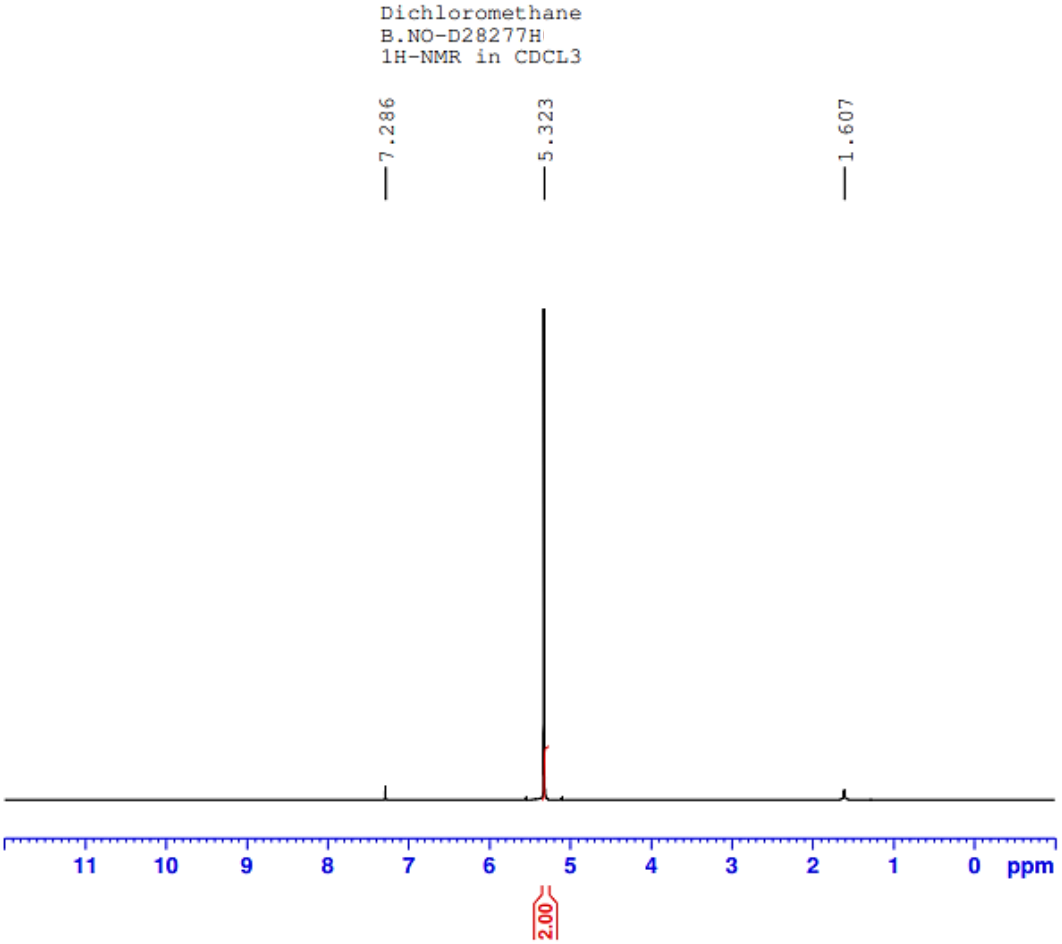
^{1}H NMR Spectrum:

Product Name: Dichloromethane PurCert Standard for GC
Product Code: PSI032



Identification by ^{1}H NMR: Conforms to structure

Maximum limits of impurities

WATER DETERMINATION

Method: Karl Fisher titration
Water Content (PSI032) = **0.0419 %**

Approved By
Head - Technical