

Certificate of Analysis

Tetrachloroethylene

PurCert Standard for GC

Product Number	PSR39942	CAS No.	127-18-4
Brand	PureSynth	Lot No.	T39942S0724
Molecular Formula	C ₂ Cl ₄	Date of Mfg.	July, 2024
Molecular Weight	165.83 g/mol	Date of Exp.	June, 2027

Test	Specification	Result
Description	White Solid	White Solid
Assay (GC-FID)	≥ 99.5 %	99.95 %
Water (By KF)	NMT 0.20 %	0.107 %
Density	1.621-1.623 g/cm ³	1.62 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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Assay by GC-FID

METHOD: GC- FID conditions:

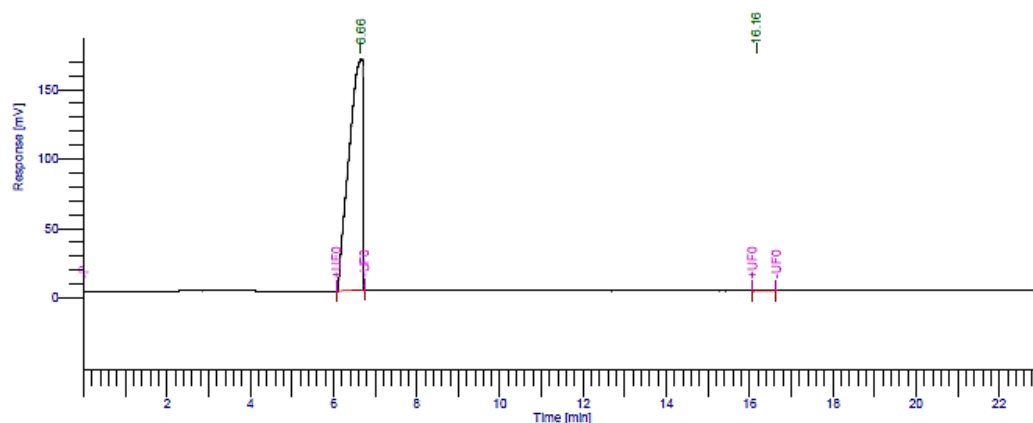
Column: Agilent Technologies DB-FFAP 30mx 0.530mm, 1.0micron

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	: 19-09-2024 11:18:52
Operator	: manager	Sample Name	: TETRACHLOROETHYLENE-T39942S
Sample Number	: 001		0724
AutoSampler	: BUILT-IN	Study	:
Instrument Name	: Clarus 690	Rack/Vial	: 0/2
Instrument Serial #	: None	Channel	: A
Delay Time	: 0.00 min	A/D mV Range	: 1000
Sampling Rate	: 12.5000 pts/s	End Time	: 23.00 min
Sample Volume	: 1.000000 ul		
Sample Amount	: 1.0000		
Data Acquisition Time	: 19-09-2024 10:26:36	Area Reject	: 0.000000
		Dilution Factor	: 1.00
		Cycle	: 1



GC Reports

Peak #	Component Name	Time [min]	Area [uV*sec]	Height [uV]	Area [%]
1		6.656	3778900.48	166473.73	99.95
2		16.163	1917.37	96.14	0.05
			3780817.85	166569.87	100.00

Missing Component Report

Component Expected Retention (Calibration File)

All components were found

Purity by GC-FID: 99.95 %

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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:

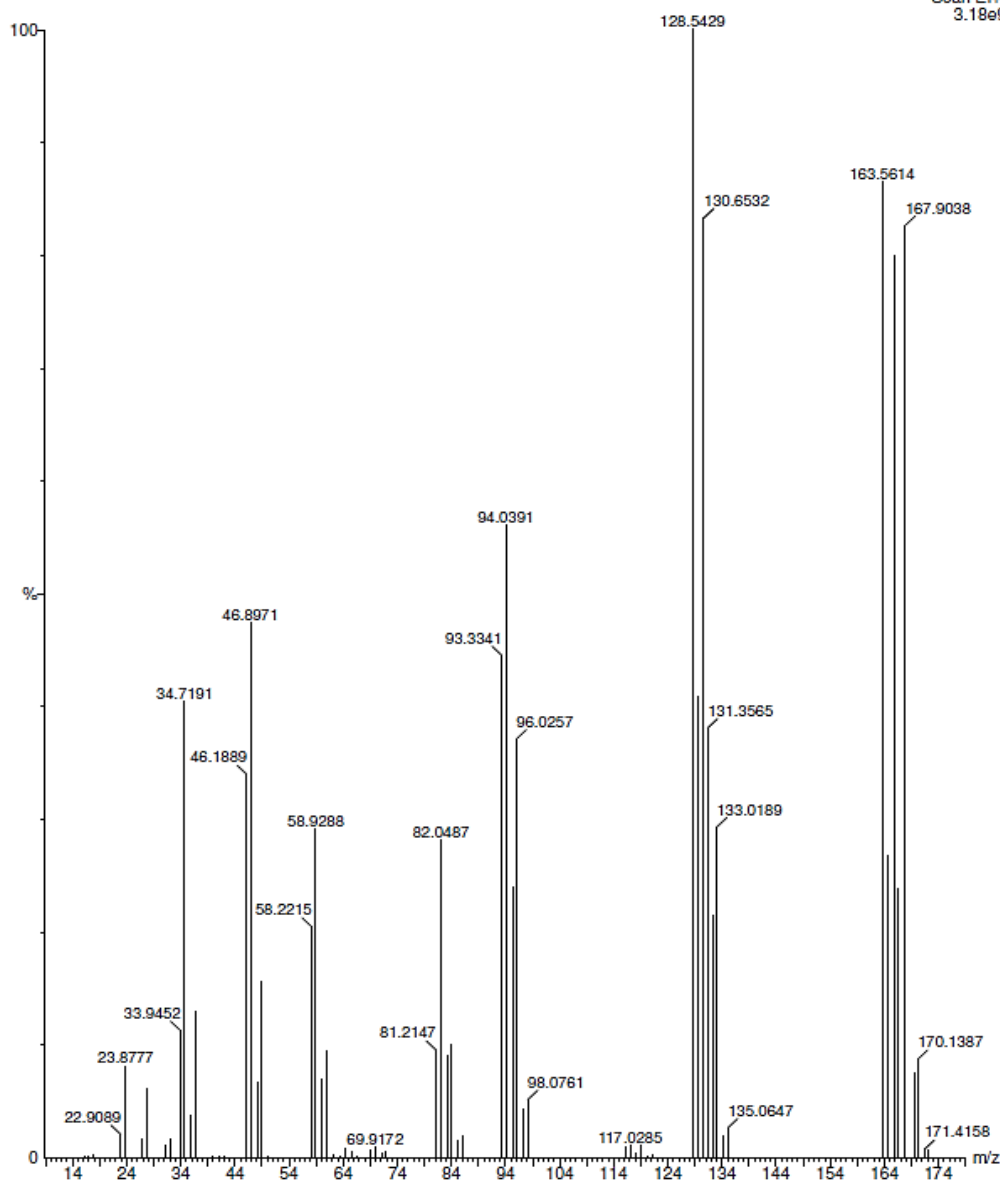
Product Name: Tetrachloroethylene

Product Code: PSR39942

TETRACHLOROETHYLENE-T39942S0724

, 19-Sep-2024 + 11:22:08

Scan EI+
3.18e9



Identification by GC-MS: Conforms to molecular mass

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Infrared spectrum:

Product Name: Tetrachloroethylene

Product Code: PSR39942

Analyst
Date



Source Spectra Results		
Spectrum Name		Number Of Peaks
AR24000566-Tetrachloroethylene_1		7
List of Peak Area/Height		
Peak Number	X (cm-1)	Y (%T)
1	2879.15	100.96
2	1354.25	98.61
3	1122.99	97.20
4	902.69	6.33
5	800.90	66.62
6	775.14	24.30
7	756.06	69.12

Identification by IR: Conforms to structure

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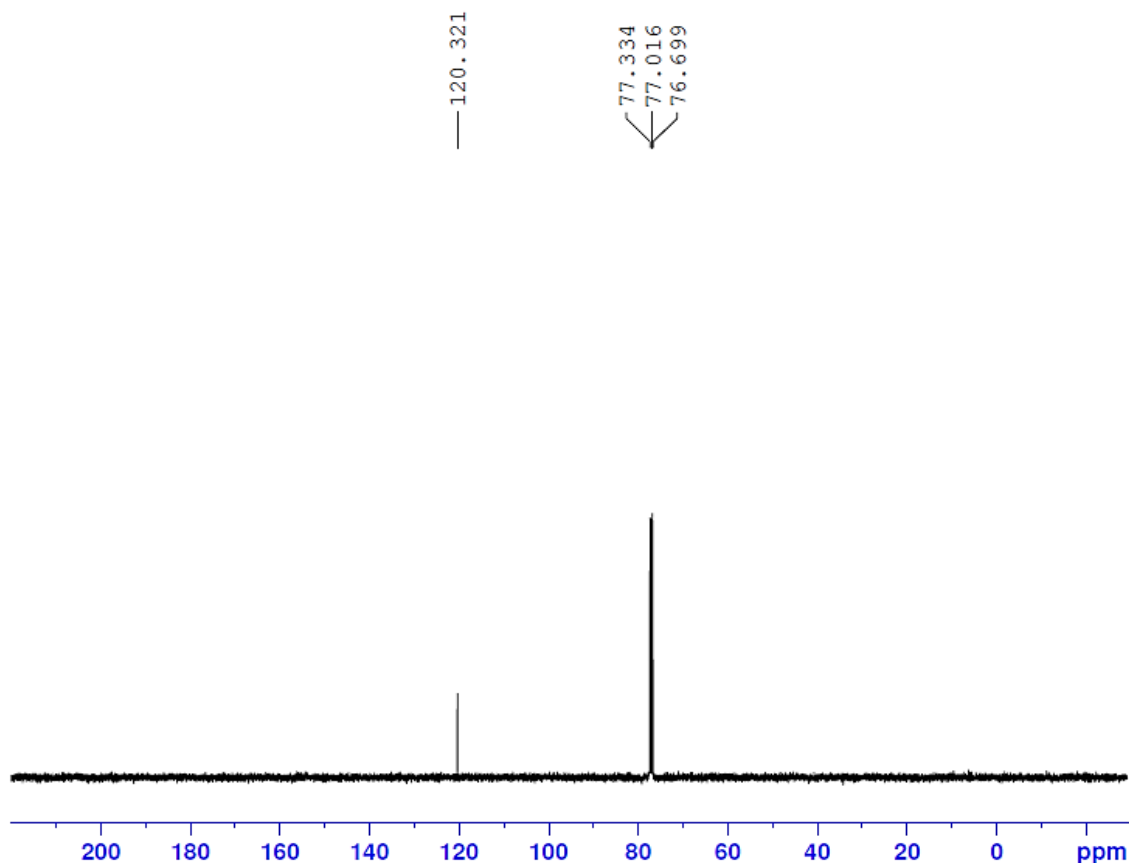
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¹H NMR Spectrum:

Product Name: Tetrachloroethylene

Product Code: PSR39942

Tetrachloroethylene
B.No:T39942S0724
13C-NMR in CDCL3



Identification by ¹H NMR: Conforms to structure

Maximum limits of impurities

WATER DETERMINATION

Method: Karl Fisher titration

Water Content (PSR39942) = **0.107 %**

Approved By
Head - Technical

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