

Certificate of Analysis

Methyl 5-chloropentanoate

PurCert Standard for GC

Product Number	PSR45933	CAS No.	14273-86-0
Brand	PureSynth	Lot No.	M45933B0125
Molecular Formula	C ₆ H ₁₁ ClO ₂	Date of Mfg.	January,2025
Molecular Weight	150.6 g/mol	Date of Exp.	December,2028

Test	Specification	Result
Description	Colorless Liquid	Colorless Liquid
Assay (GC-FID)	≥ 99.0 %	99.98 %
Water (By KF)	NMT 0.200 %	0.145 %
Density	1.045-1.050 g/cm ³	1.047 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:

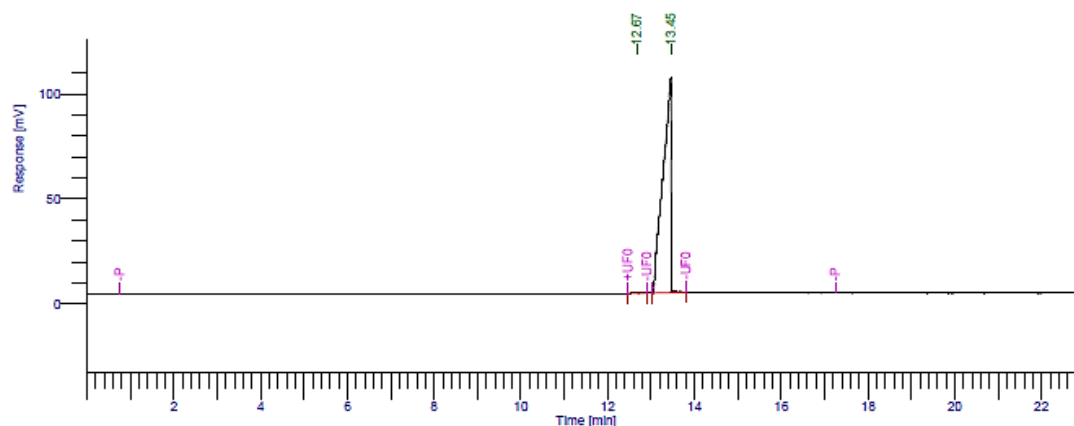
Column: Agilent Technologies DB-FFAP 30mx 0.530mm, 1.0micron

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	: 03-02-2025 16:49:00
Operator	: manager	Sample Name	: METHYL 5-CHLOROPENTANOATE-M
Sample Number	: 001		45933B0125
AutoSampler	: BUILT-IN	Study	:
Instrument Name	: Clarus 690	Rack/Vial	: 0/25
Instrument Serial #	: 690S23050206	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	: 03-02-2025 14:19:42	Area Reject	: 0.000000
		Dilution Factor	: 1.00
		Cycle	: 1



GC Reports

Peak #	Component Name	Time [min]	Area [uV*sec]	Height [uV]	Area [%]
1		12.675	232.03	17.12	0.02
2		13.453	1322530.93	102465.81	99.98
			1322762.96	102482.93	100.00

Missing Component Report
Component Expected Retention (Calibration File)

All components were found

Purity by GC-FID: 99.98 %

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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:

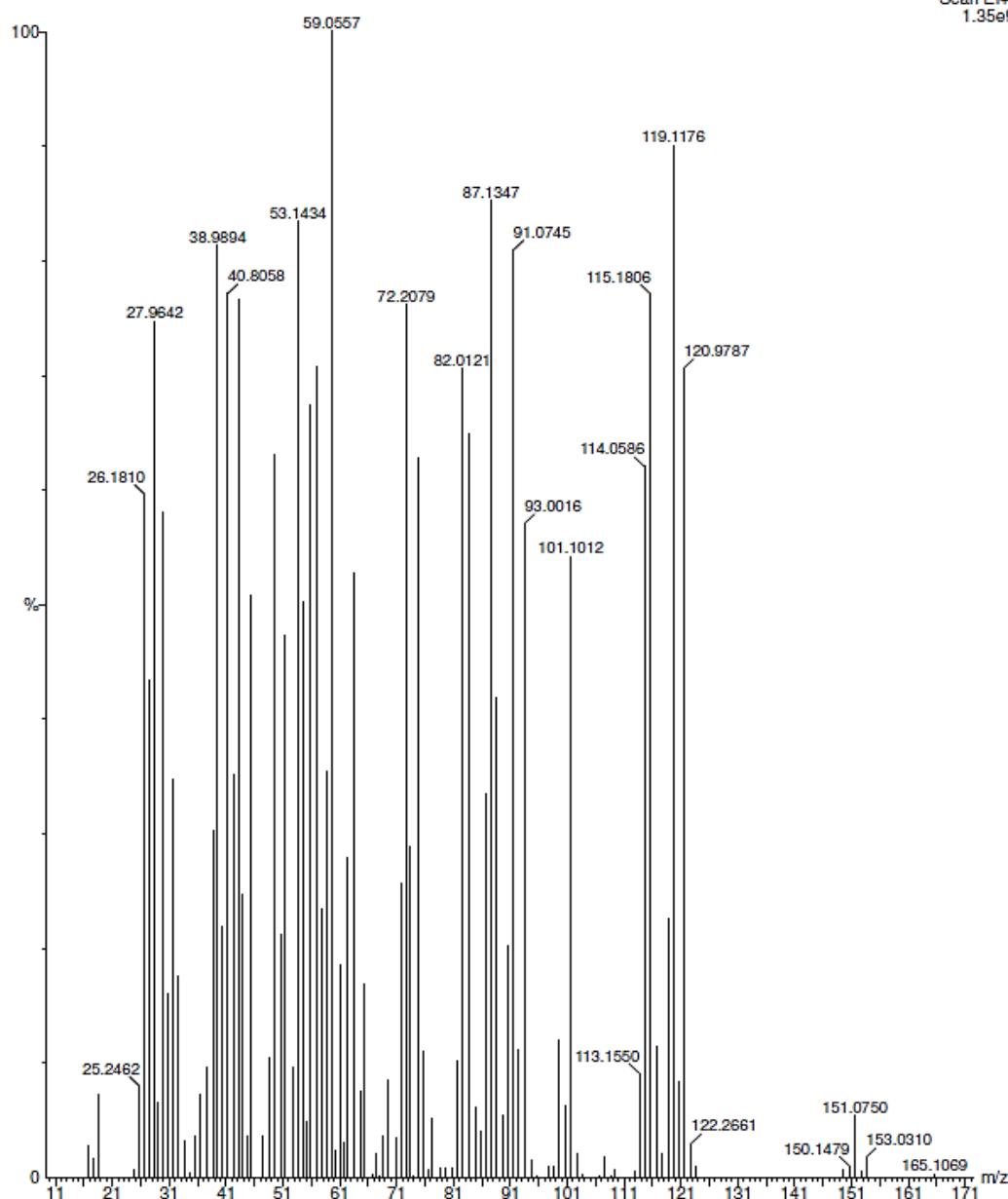
Product Name: Methyl 5-chloropentanoate

Product Code: PSR45933

METHYL 5-CHLOROPENTANOATE-M45933B0125

, 03-Feb-2025 + 14:59:15

Scan EI+
1.35e9



Identification by GC-MS: Conforms to molecular mass

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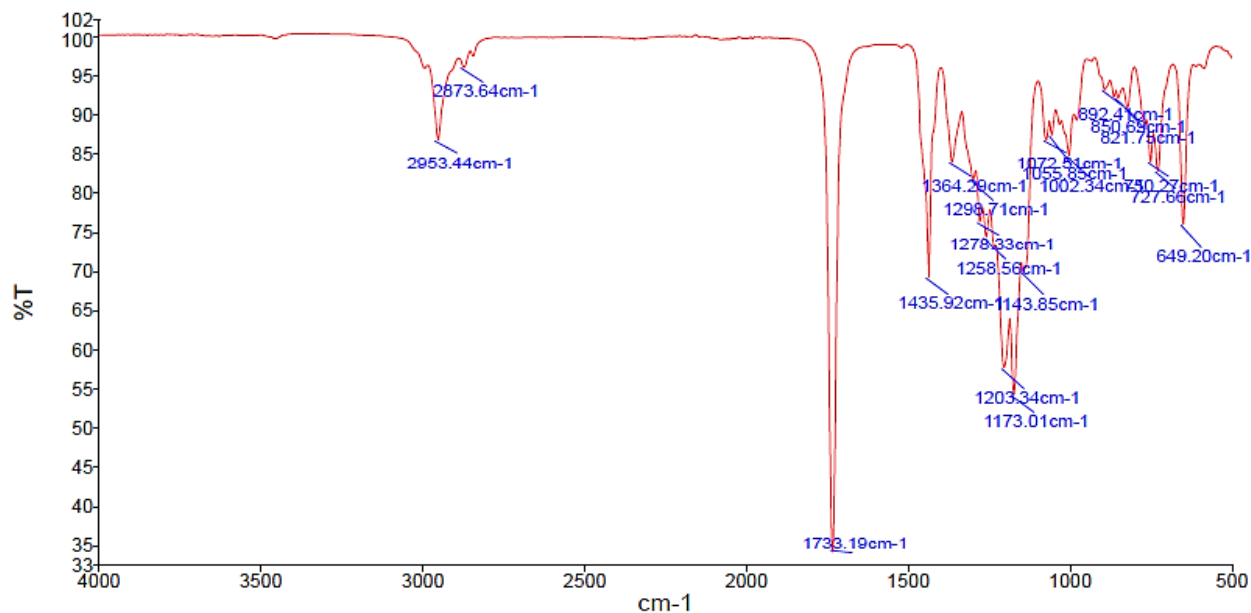
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Infrared spectrum:

Product Name: Methyl 5-chloropentanoate

Product Code: PSR45933

Analyst
Date



AR25000128-Methyl 5-chloropentanoate-M45933B0125_1 Sample 003 By Analyst Date Monday, February 03 2025

Source Spectra Results		
Spectrum Name		Number Of Peaks
AR25000128-Methyl 5-chloropentanoate-M45933B0125_1		20
List of Peak Area/Height		
Peak Number	X (cm-1)	Y (%T)
1	2953.44	86.84
2	2873.64	96.17
3	1733.19	34.16
4	1435.92	69.35
5	1364.29	84.08
6	1298.71	81.83
7	1278.33	76.41
8	1258.56	74.48
9	1203.34	57.78
10	1173.01	54.29
11	1143.85	70.08
12	1072.51	86.87
13	1055.85	87.53
14	1002.34	84.87
15	892.41	93.30
16	850.69	92.26
17	821.75	91.01
18	750.27	84.08
19	727.66	82.89
20	649.20	76.08

Identification by IR: Conforms to structure

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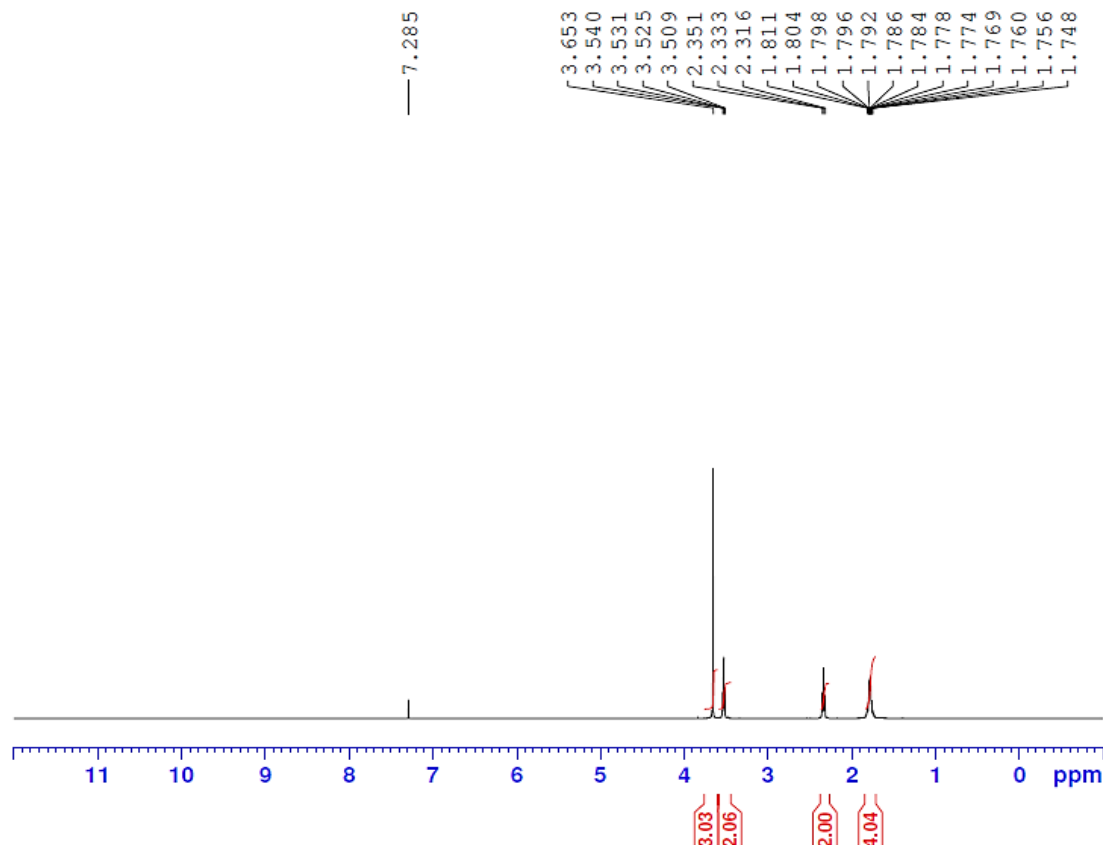
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¹H NMR Spectrum:

Product Name: Methyl 5-chloropentanoate

Product Code: PSR45933

Methyl 5-chloropentanoate
B.No: M45933B0125
1H-NMR in CDCl₃



Identification by ¹H NMR: Conforms to structure

Maximum limits of impurities

WATER DETERMINATION

Method: Karl Fisher titration

Water Content (PSR45933) = **0.145 %**

Approved By
Head - Technical

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