

Certificate of Analysis

Ethyl Valerate PurCert Standard for GC

Product Number	PSR42754	CAS No.	539-82-2
Brand	PureSynth	Lot No.	E42754T0823
Molecular Formula	C ₇ H ₁₄ O ₂	Date of Mfg.	August.2023
Molecular Weight	130.19 g/mol	Date of Exp.	July.2027

Test	Specification	Result
Description	Colorless liquid	Colorless liquid
Assay (GC-FID)	≥ 99.0 %	99.30 %
Water (By KF)	NMT 0.2000 %	0.1272 %
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:

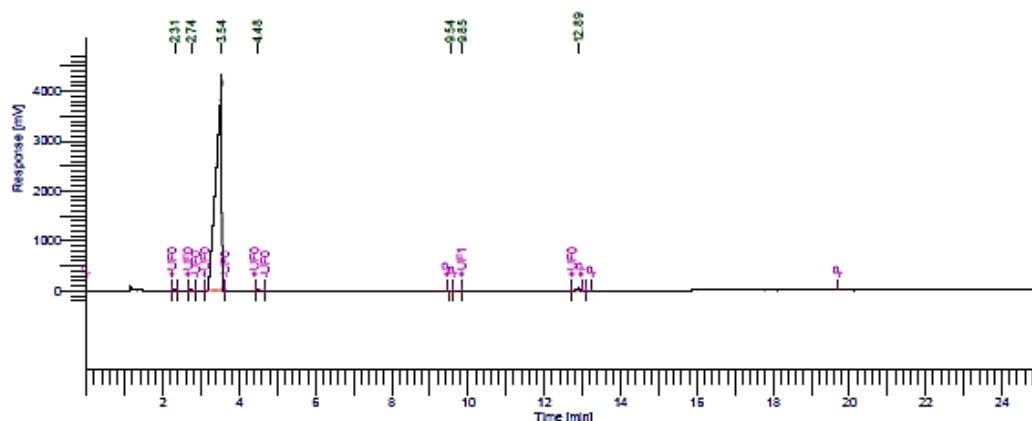
Column: Agilent Technologies DB-FFAP 30mx 0.530mm, 1.0micron

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	: 21-11-2023 18:47:17
Operator	: manager	Sample Name	: ETHYL VALERATE-E42754T0823
Sample Number	: 001	Study	:
AutoSampler	: BUILT-IN	Rack/Vial	: 0/20
Instrument Name	: Clarus 690	Channel	: A
Instrument Serial #	: None	A/D mV Range	: 1000
Delay Time	: 0.00 min	End Time	: 25.00 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	: 21-11-2023 18:11:15	Cycle	: 1



GC Reports

Peak #	Component Name	Time [min]	Area [uV*sec]	Height [uV]	Area [%]
1		2.309	33707.24	7049.92	0.07
2		2.741	29000.97	4150.96	0.06
3		3.543	45026393.58	4.31e+06	99.30
4		4.480	67005.53	32506.59	0.15
5		9.537	111.98	44.52	0.00
6		9.848	0.01	0.07	2e-08
7		12.893	186510.80	45597.81	0.41
		45342730.11	4.40e+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: 99.30 %

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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:

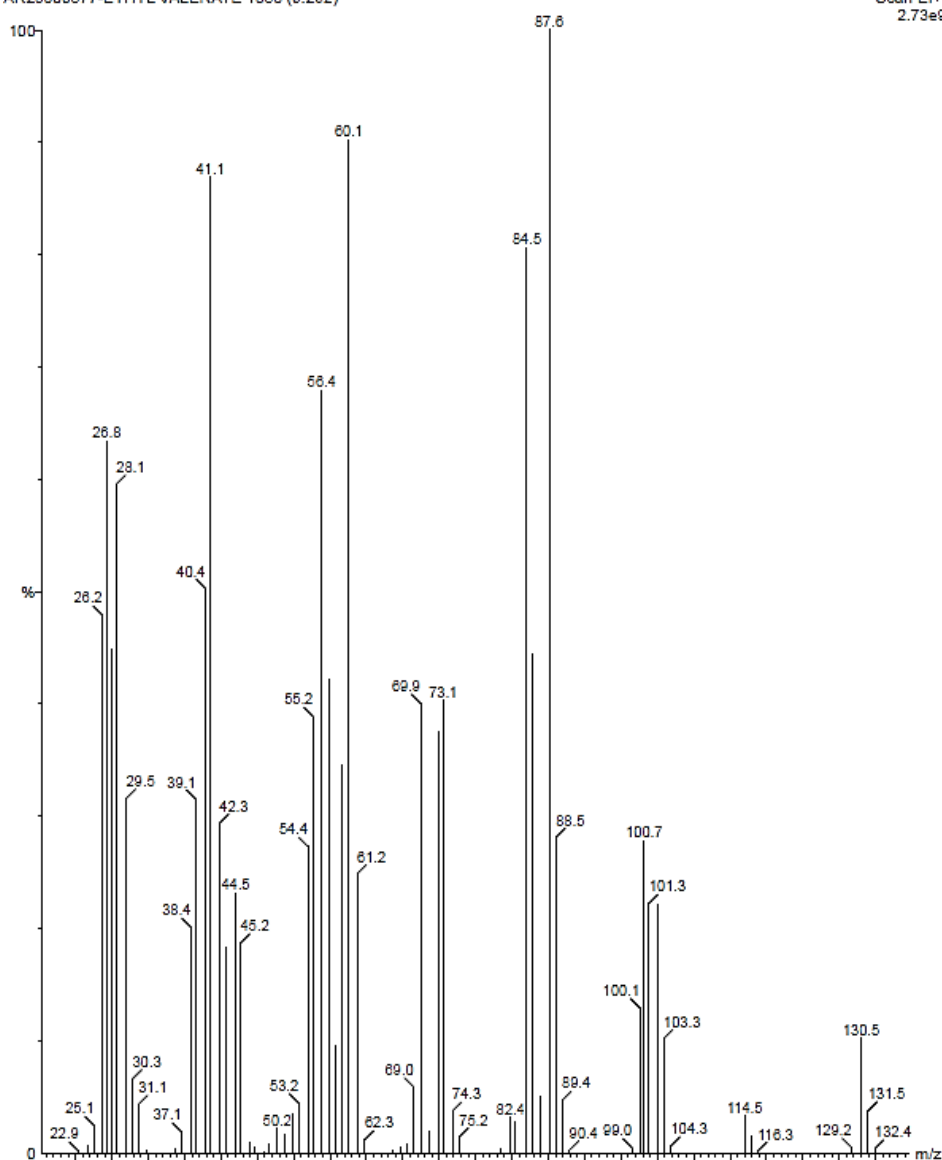
Product Name: Ethyl Valerate

Product Code: PSR42754

, 20-Nov-2023 + 14:45:30

AR23000577-ETHYL VALERATE 1858 (9.292)

Scan E1+
2.73e9



Identification by GC-MS: Conforms to molecular mass

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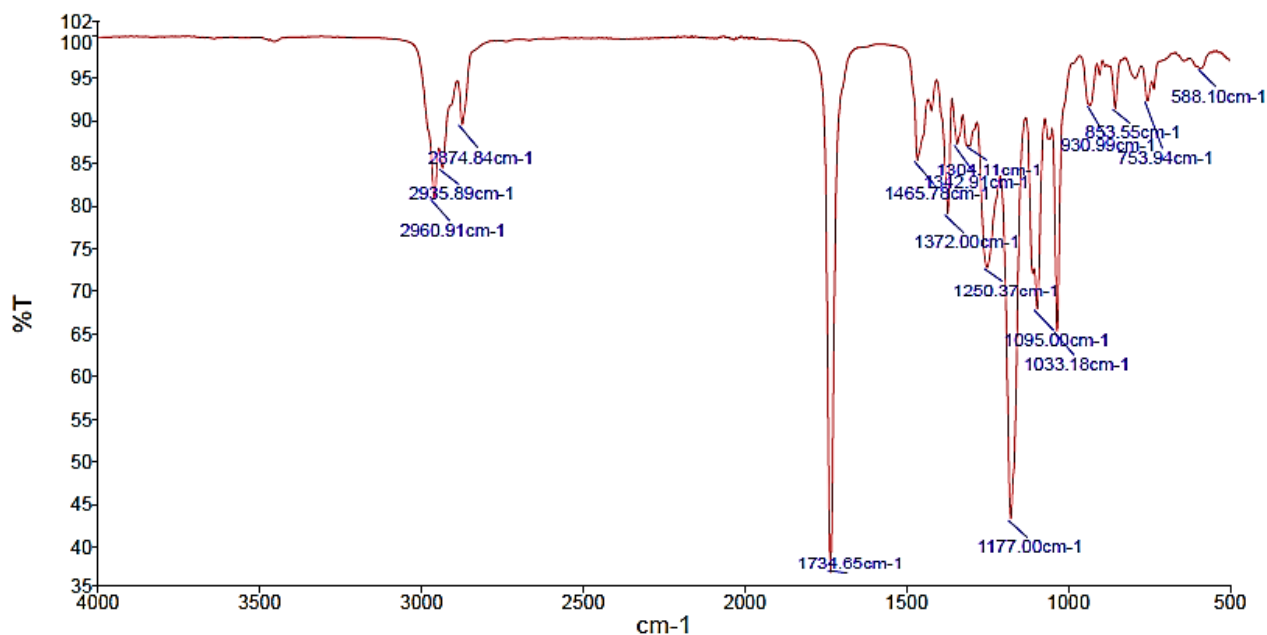
Infrared spectrum:

Product Name: Ethyl Valerate

Product Code: PSR42754

Analyst

Date



AR23000153-Ethyl Valerate-E42754T0823_1

Sample 002 By Analyst Date Tuesday, November 21 2023

Source Spectra Results		
Spectrum Name		Number Of Peaks
AR23000153-Ethyl Valerate-E42754T0823_1		16
List of Peak Area/Height		
Peak Number	X (cm-1)	Y (%T)
1	2960.91	80.88
2	2935.89	84.49
3	2874.84	89.63
4	1734.65	37.02
5	1465.78	85.36
6	1372.00	79.12
7	1342.91	87.26
8	1304.11	87.07
9	1250.37	72.80
10	1177.00	43.32
11	1095.00	67.95
12	1033.18	65.35
13	930.99	91.85
14	853.55	91.50
15	753.94	92.37
16	588.10	96.15

Identification by IR: Conforms to structure

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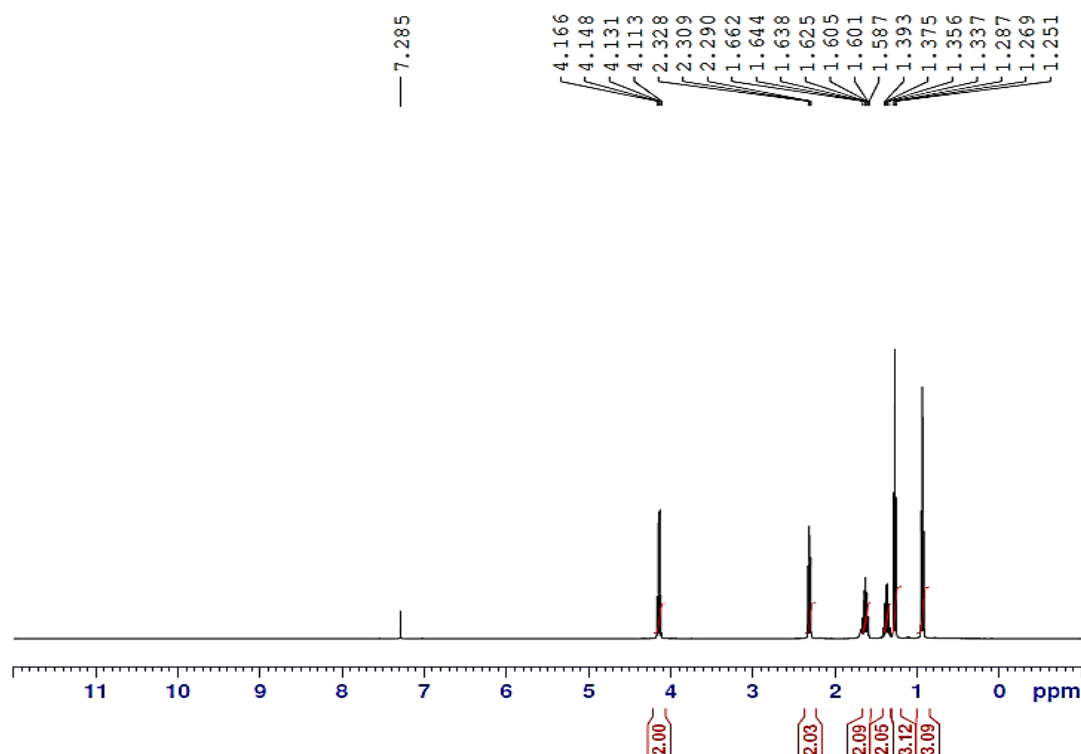
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¹H NMR Spectrum:

Product Name: Ethyl Valerate

Product Code: PSR42754

Ethyl Valerate
BNo.E42754T0823
1H-NMR in CDCl₃



Identification by ¹H NMR: Conforms to structure

Maximum limits of impurities

WATER DETERMINATION

Method: Karl Fisher titration

Water Content (PSR42754) = **0.1272 %**

Approved By
Head - Technical

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