

Certificate of Analysis

DL-alpha-Tocopherol

PurCert Standard for GC

(Secondary reference standard)

Product Number	PSR37975	CAS No.	10191-41-0
Brand	PureSynth	Lot No.	T37975B0623
Molecular Formula	C ₂₉ H ₅₀ O ₂	Date of Mfg.	June,2023
Molecular Weight	430.71 g/mol	Date of Exp.	May,2027

Test	Specification	Result
Description	Brown Liquid	Brown Liquid
Assay (GC-FID)	≥ 99.50 %	99.86 %
Water (By KF)	NMT 0.1000 %	0.0950 %
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 USP Reference Standard 1667600, Lot no: R094X0**

Storage Condition: Store at a temperature of -20°C and keep the container tightly closed.
(Stable to ship at 2-8°C)

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

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Assay by GC-FID

METHOD: GC- FID conditions:

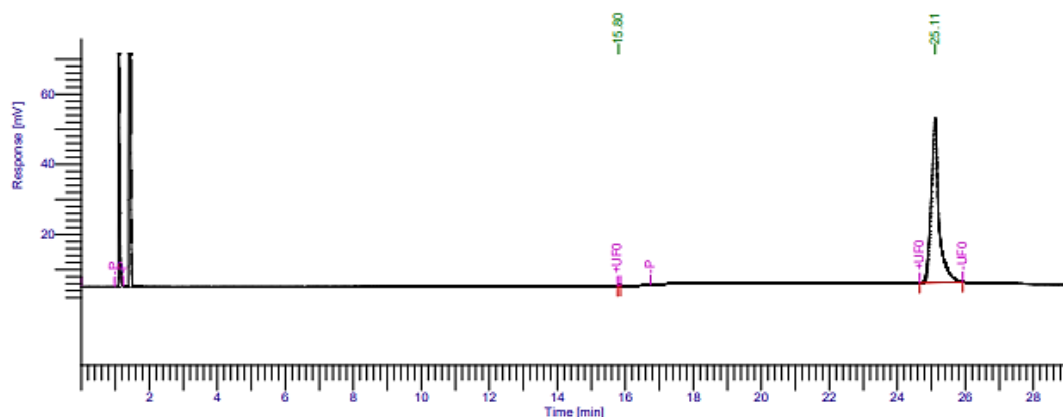
Column: Agilent Technologies DB-FFAP 30mx 0.530mm, 1.0micron

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	: 21-09-2023 17:55:18
Operator	: manager	Sample Name	: DL-alpha-tocopherol-T37975B0623
Sample Number	: 001	Study	:
AutoSampler	: BUILT-IN	Rack/Vial	: 0/19
Instrument Name	: Clarus 690	Channel	: A
Instrument Serial #	: 690S23050206	A/D mV Range	: 1000
Delay Time	: 0.00 min	End Time	: 29.00 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	: 20-09-2023 17:44:00	Cycle	: 1



GC Reports

Peak #	Component Name	Time [min]	Area [uV*sec]	Height [uV]	Area [%]
1		15.801	1076.20	524.67	0.14
2		25.113	747063.21	46874.30	99.86
		748139.42	47398.97	100.00	

Missing Component Report

Component Expected Retention (Calibration File)

All components were found

Purity by GC-FID: 99.86 %

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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

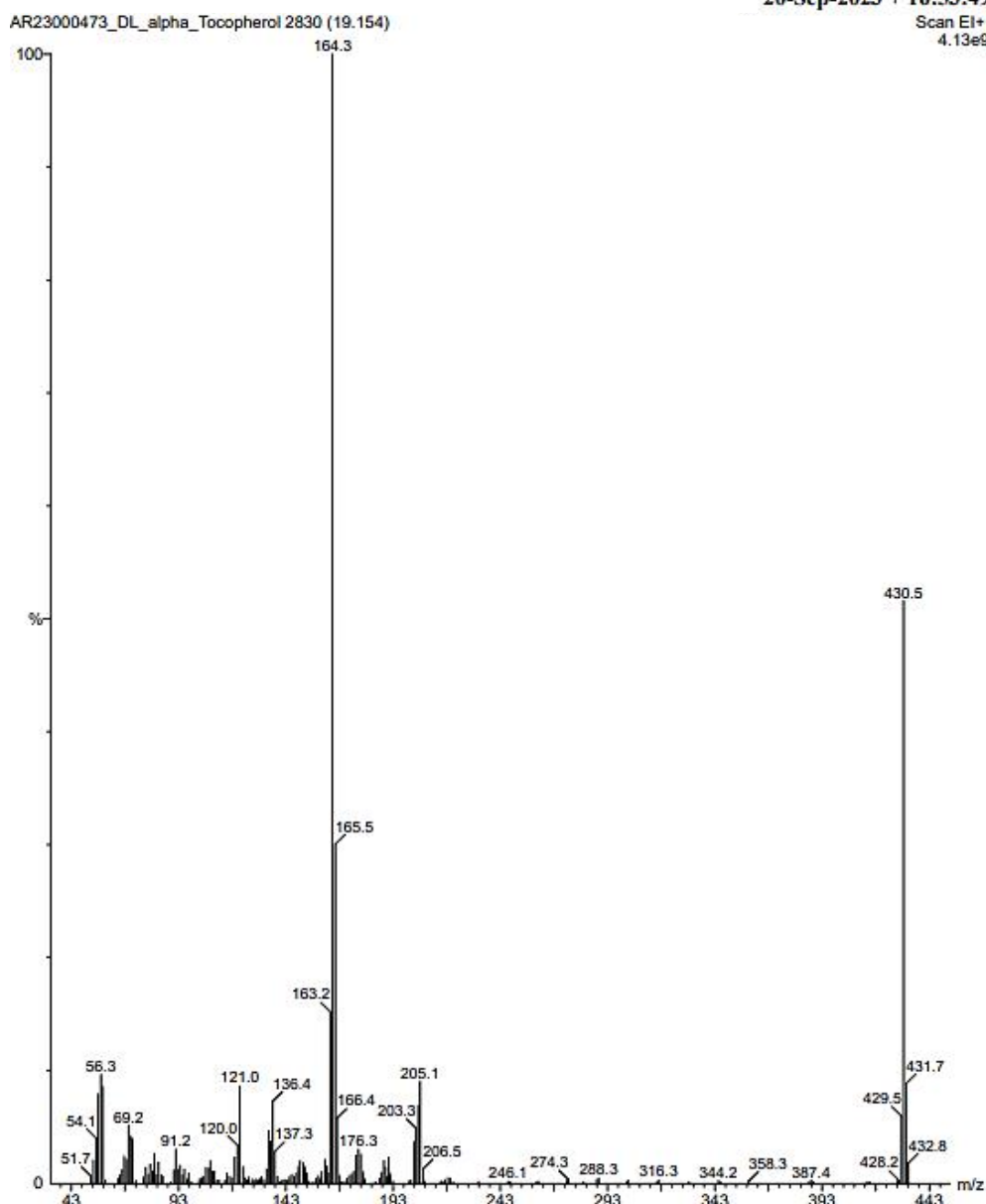
Mass by GC-MS:

Product Name: DL-alpha-Tocopherol

Product Code: PSR37975

20-Sep-2023 + 16:53:49

Scan EI+
4.13e9



Identification by GC-MS: Conforms to molecular mass

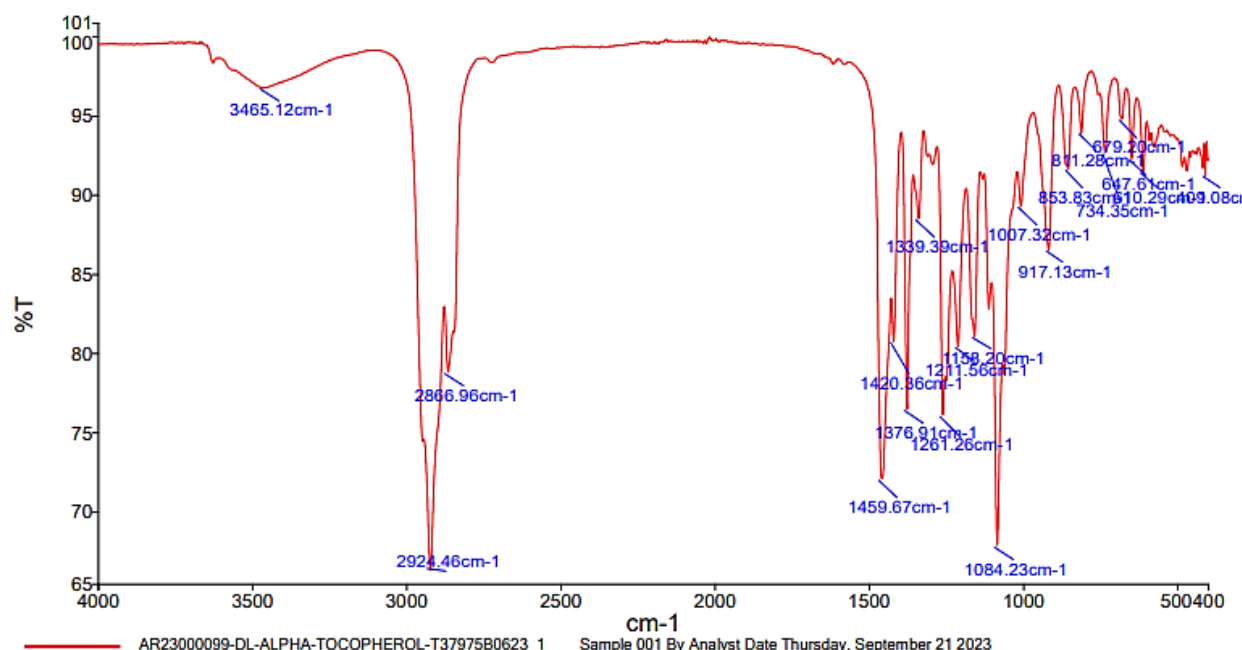
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Infrared spectrum:

Product Name: DL-alpha-Tocopherol

Product Code: PSR37975



Source Spectra Results		
Spectrum Name		Number Of Peaks
AR23000099-DL-ALPHA-TOCOPHEROL-T37975B0623_1		20
List of Peak Area/Height		
Peak Number	X (cm-1)	Y (%T)
1	3465.12	96.80
2	2924.46	66.29
3	2866.96	78.82
4	1459.67	72.10
5	1420.36	80.80
6	1376.91	76.50
7	1339.39	88.53
8	1261.26	76.12
9	1211.56	80.45
10	1158.20	81.11
11	1084.23	67.87
12	1007.32	89.32
13	917.13	86.58
14	853.83	91.67
15	811.28	93.96
16	734.35	92.70
17	679.20	94.83
18	647.61	92.34
19	610.29	91.50
20	409.08	91.29

Identification by IR: Conforms to structure

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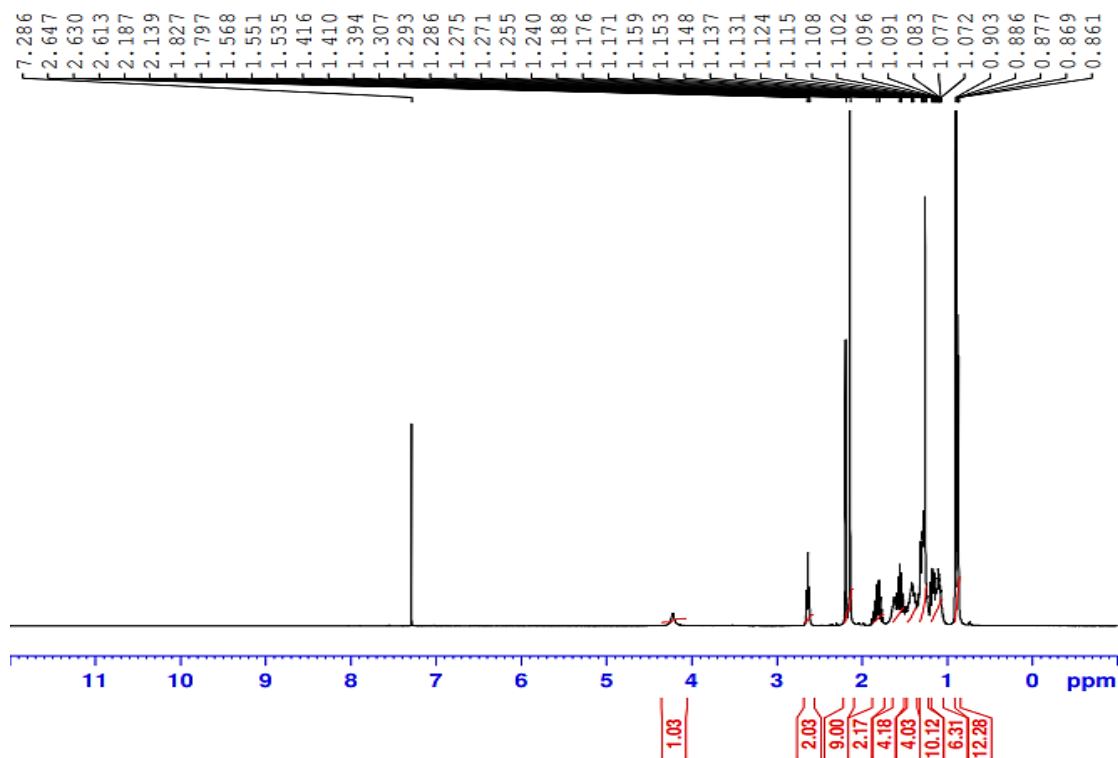
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¹H NMR Spectrum:

Product Name: DL-alpha-Tocopherol

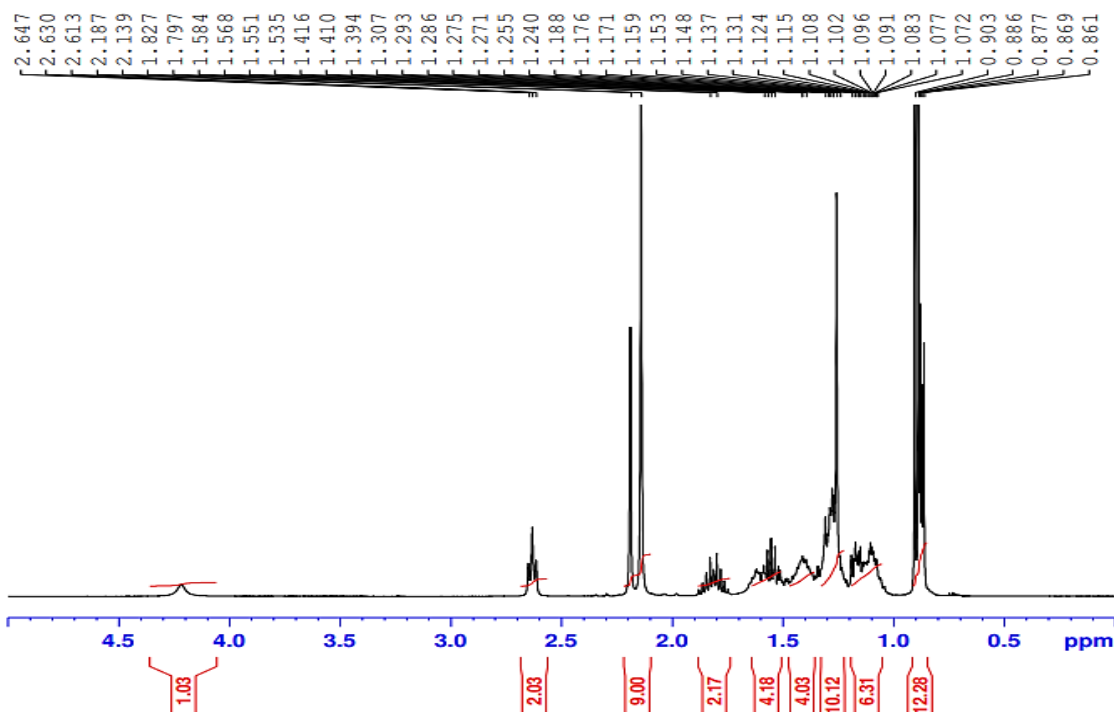
Product Code: PSR37975

DL-alpha-tocopherol
B.no-T37975B0623
1H-NMR in CDCL3



¹H NMR Spectrum: Expansion

DL-alpha-tocopherol
B.no-T37975B0623
1H-NMR in CDCL3



Identification by ¹H NMR: Conforms to structure

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Maximum limits of impurities

WATER DETERMINATION

Method: Karl Fisher titration

Water Content (PSR37975) = **0.0950 %**

Approved By
Head - Technical

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