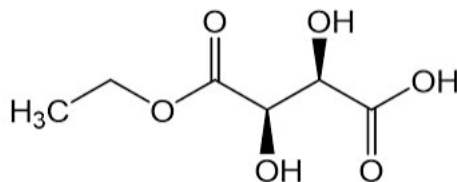


CERTIFICATE OF ANALYSIS

Product Name	L-[+]-Tartaric acid Monoethyl Ester		
Synonyms	Monoethyl tartrate		
CAS No	608-89-9		
Product code	SYI0060	Batch No	LTABF0704
Molecular Formula	C ₆ H ₁₀ O ₆	Molecular Weight	178.14
Mfg. Date	Jul-26	Retest Date	Jun-28
Longe terms Storage Conditions	Store at 2 to 8 °C temperature, tightly closed container		

Test	Specification	Results
Description	Colourless gummy compound	Colourless gummy compound
Solubility	Soluble in DMSO, MeOH	Complies
Assay by QNMR	NLT 90.00%	90.31%
Identification by mass	Confirms to the molecular weight	Confirms
Identification by H¹ NMR	Confirms to the structure	Confirms
IR spectrum	Confirm with characteristic peaks	Confirms
LOD by TGA	NA	5.42%

Remarks: Based on NMR, Mass spectra and other Analytical data, the material confirms to the above structure.



Approved by
Dr. Gopinath PH. D



Computer Generated document, Does not require any Signature.

Assay by QNMR

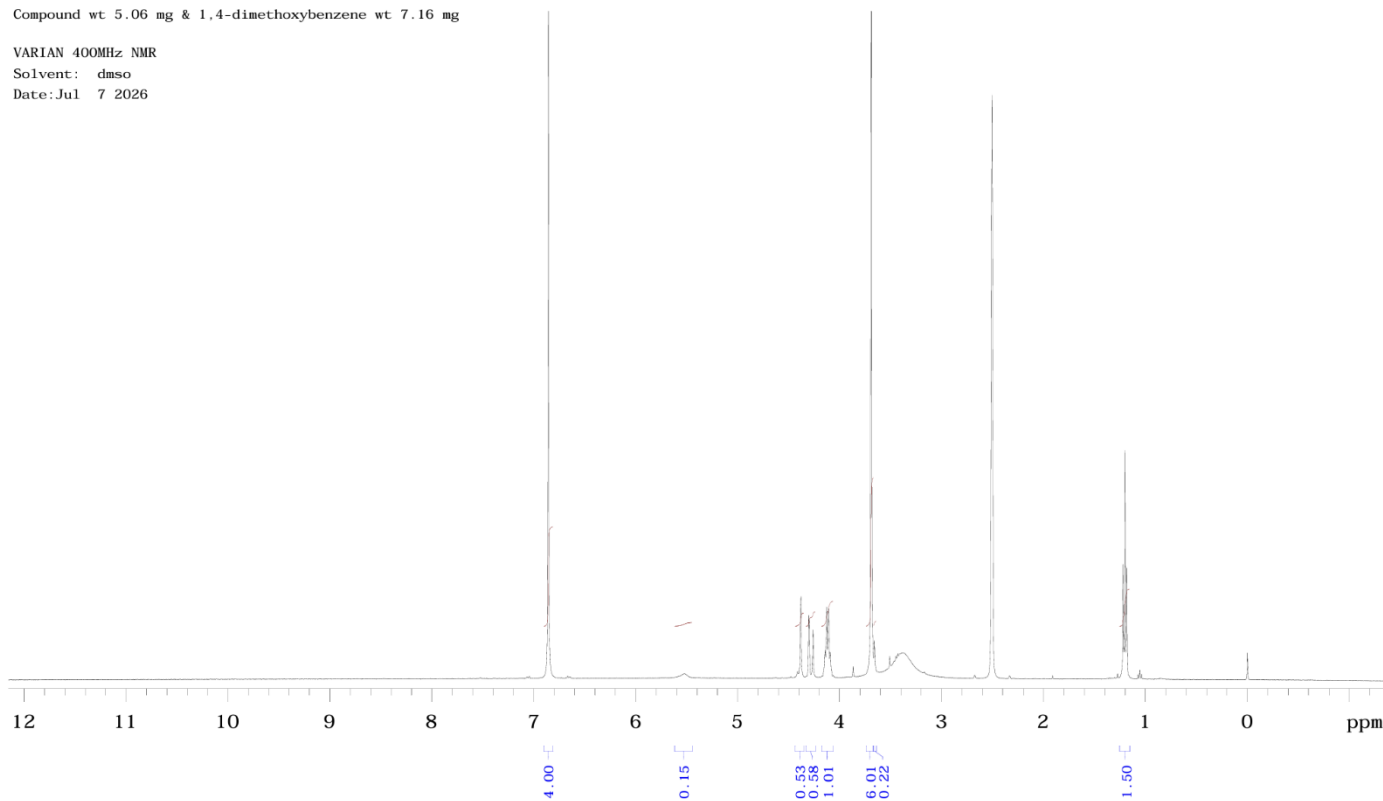
Sample code: LTABF0704

Compound wt 5.06 mg & 1,4-dimethoxybenzene wt 7.16 mg

VARIAN 400MHz NMR

Solvent: dmsd

Date: Jul 7 2026



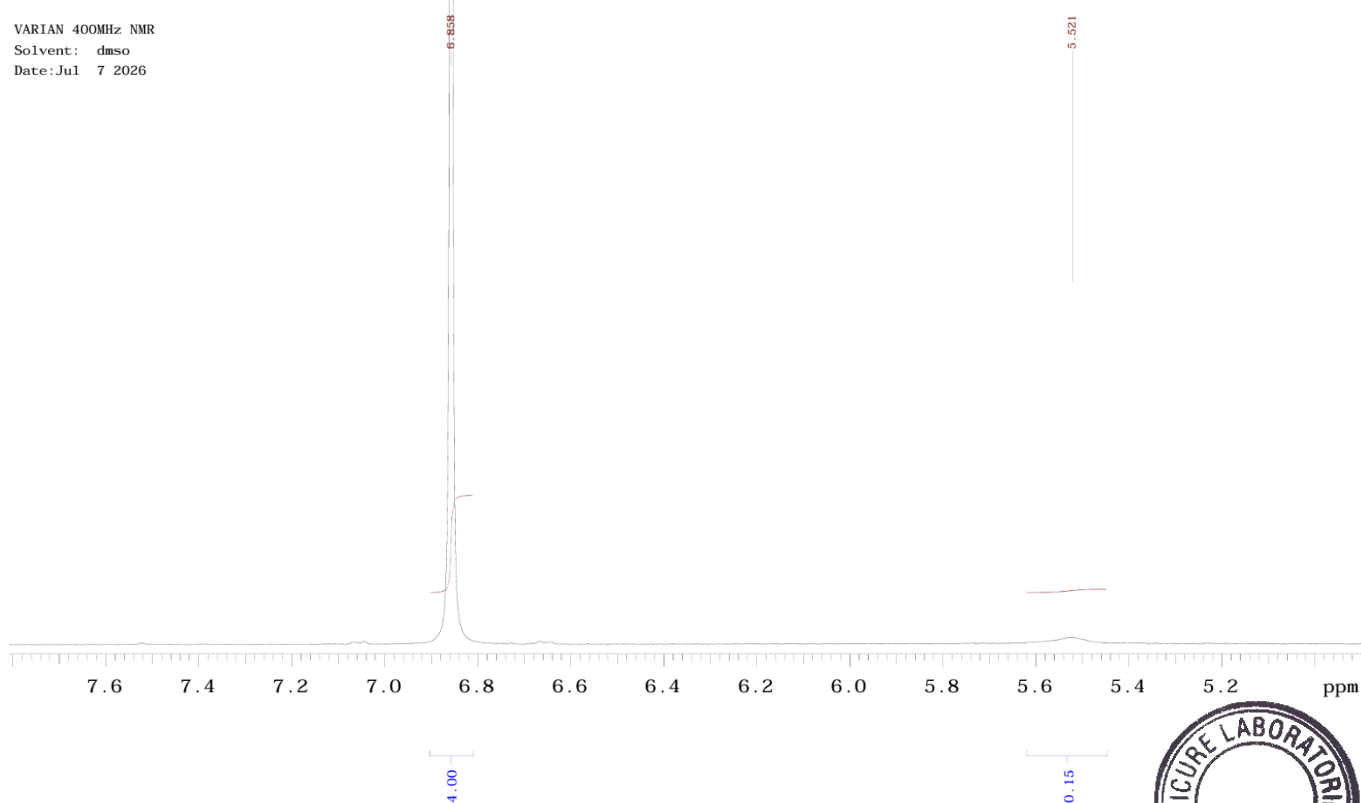
Sample code: LTABF0704

Compound wt 5.06 mg & 1,4-dimethoxybenzene wt 7.16 mg

VARIAN 400MHz NMR

Solvent: dmsd

Date: Jul 7 2026



SynthiCure Laboratories LLP, 5-5-35/276A/NR, Sakthipuram Industrial Road, Prashanth Nagar, Hyderabad-500072 Telangana, India.



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Assay by QNMR

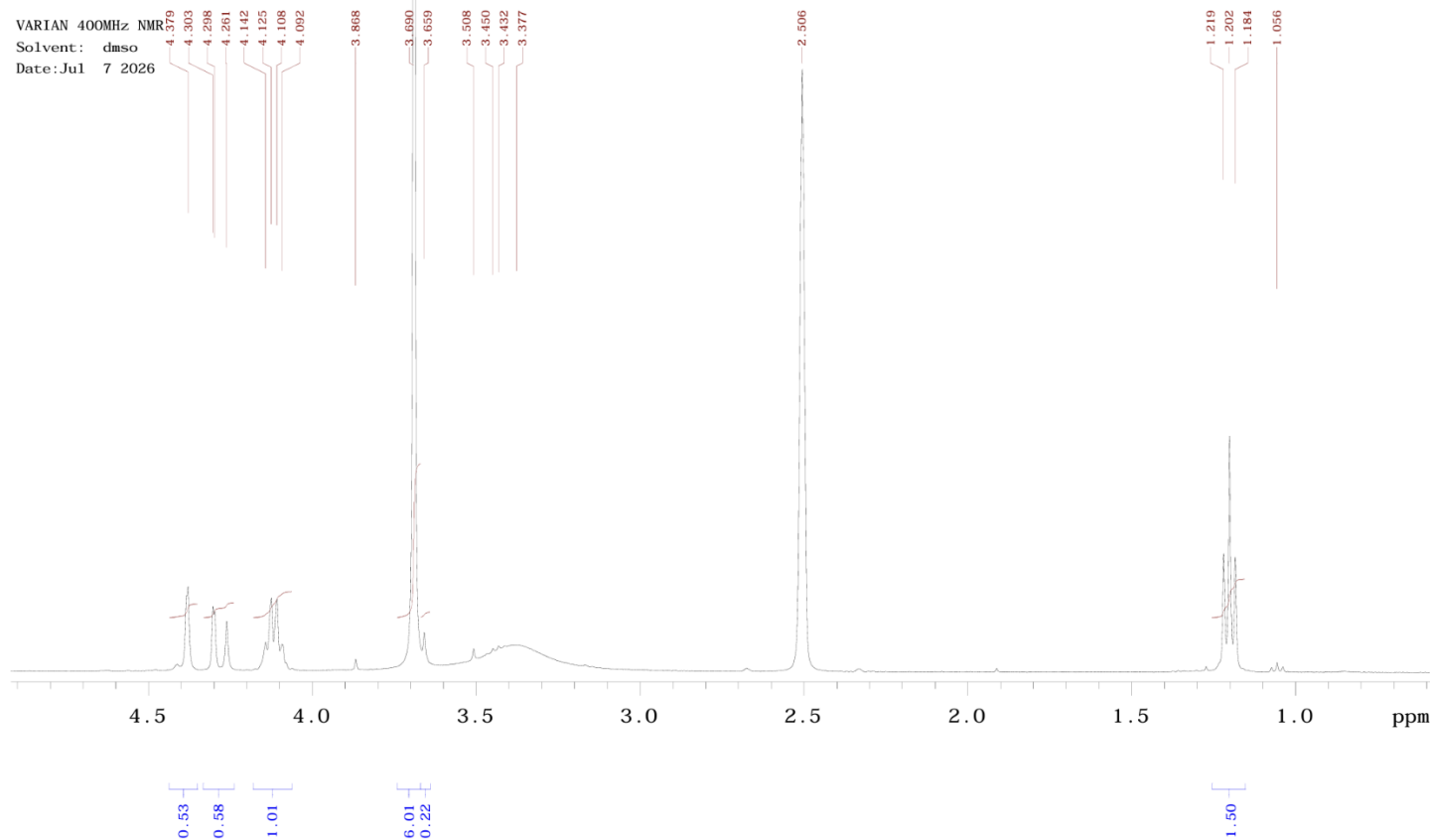
Sample code: LTABF0704

Compound wt 5.06 mg & 1,4-dimethoxybenzene wt 7.16 mg

VARIAN 400MHz NMR

Solvent: dmsO

Date: Jul 7 2026

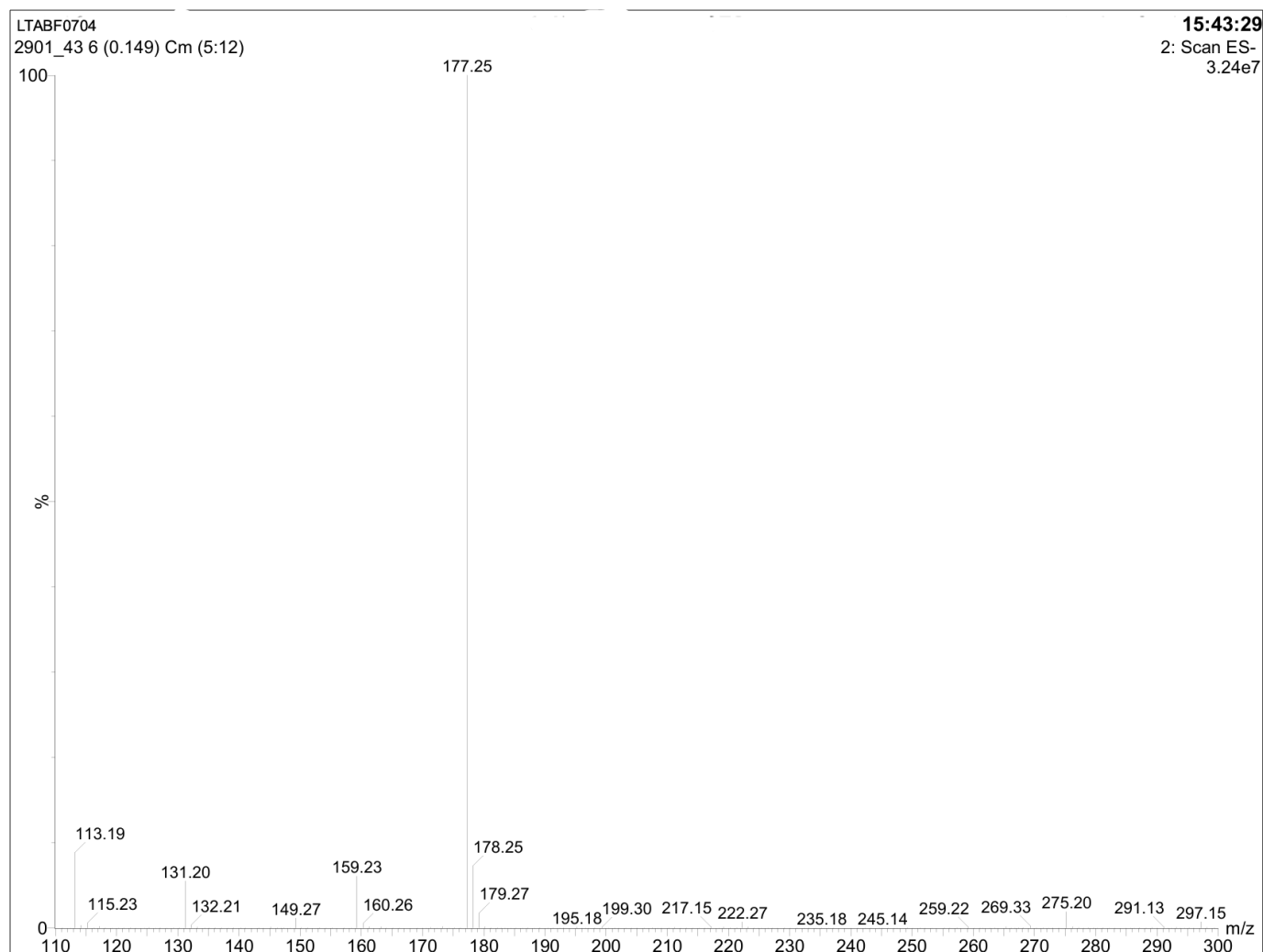


INDEX	FREQUENCY	PPM	HEIGHT
1	2740.9	6.858	262.4
2	1750.4	4.379	15.8
3	1719.9	4.303	12.1
4	1717.9	4.298	11.1
5	1703.2	4.261	9.3
6	1655.7	4.142	5.4
7	1648.9	4.125	13.7
8	1641.9	4.108	13.5
9	1635.7	4.092	5.0
10	1545.8	3.868	2.2
11	1475.0	3.690	394.1
12	1462.3	3.659	7.2
13	1402.2	3.508	4.2
14	1378.8	3.450	4.2
15	1371.5	3.432	4.7
16	1349.6	3.377	4.9
17	1001.5	2.506	112.7
18	487.4	1.219	22.0
19	480.3	1.202	44.1
20	473.3	1.184	21.3
21	422.2	1.056	1.6
22	-0.0	-0.000	4.9

Assay By NMR				
Description	Key words			Assay
Integral of Product peak	IA	1.50		
M.Wt of Product	PMWt	178.14		
Number of protons of Standard (1,4-Dimethoxy benzene)	SP	4.00	IAxPMWtxSPxESxAS	757636.5456
Weight of Standard	ES	7.16	IBxSMWtxPPxET	8389.0752
Assay of Standard	AS	99.00		
Intigration of Standard	IB	4.00		
M.Wt of Standard	SMWt	138.16		90.31%
Number of protons of Product	PP	3.00		
Weight of Test sample	ET	5.06		



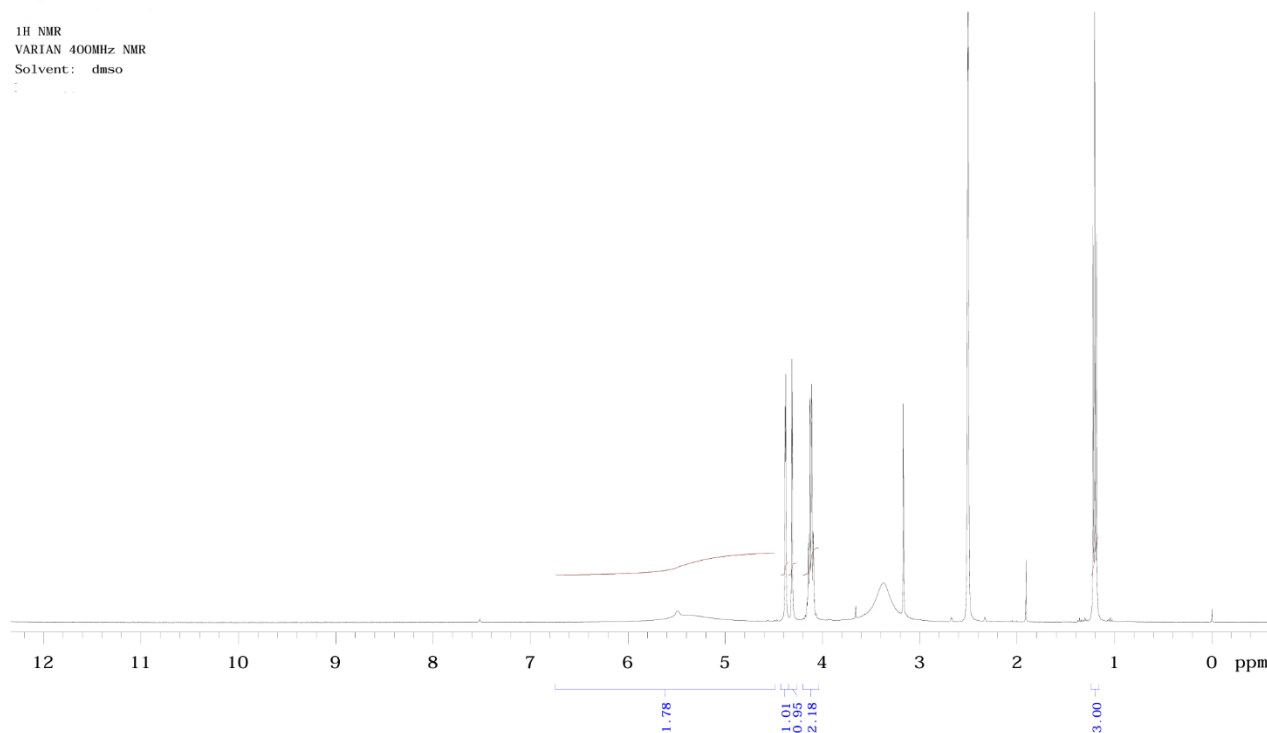
Identification by Mass spectrometry (MS)



Identification by NMR: H1NMR

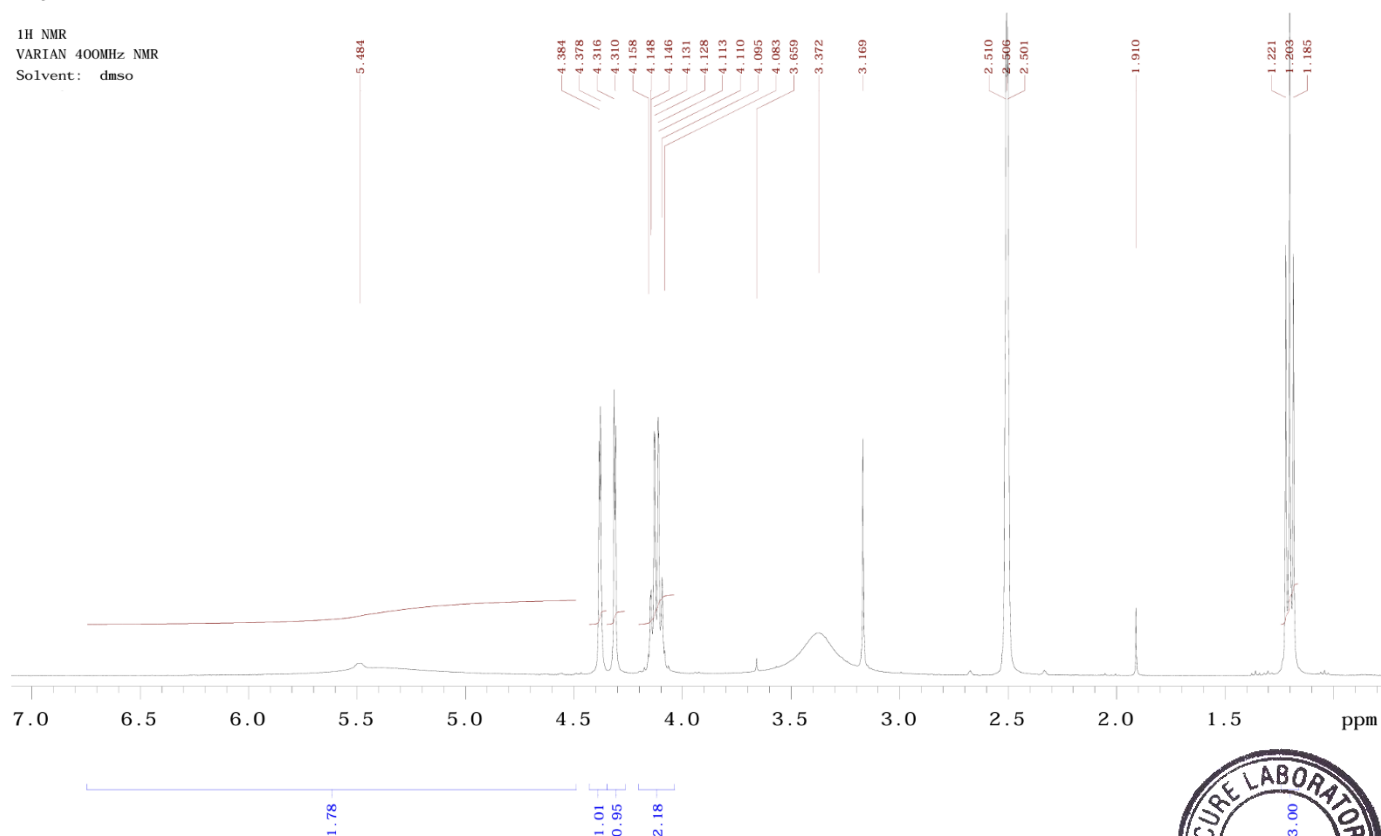
Sample code: LTABF0704

¹H NMR
VARIAN 400MHz NMR
Solvent: dmsc



Sample code: LTABF0704

¹H NMR
VARIAN 400MHz NMR
Solvent: dmsc



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Hyderabad-500072 Telangana, India.



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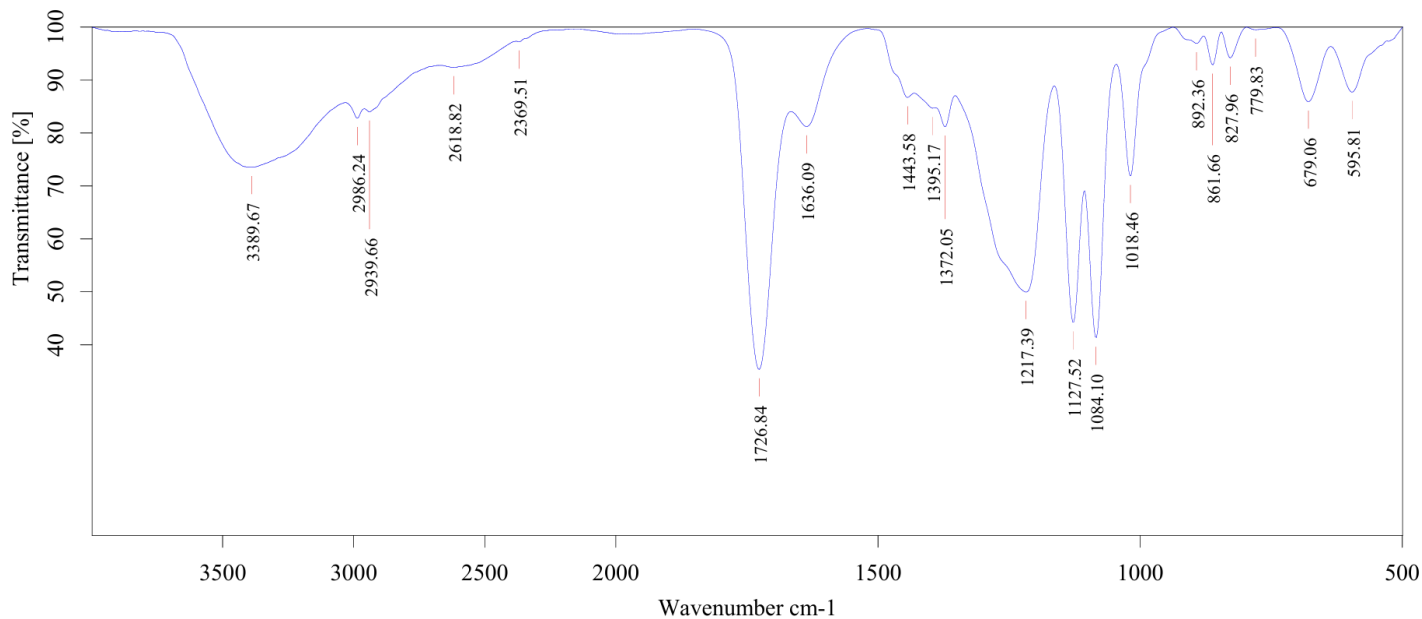


Identification by NMR: H1NMR

INDEX	FREQUENCY	PPM	HEIGHT
1	2192.1	5.484	2.4
2	1752.6	4.384	45.6
3	1750.2	4.378	52.4
4	1725.2	4.316	55.7
5	1722.8	4.310	48.7
6	1662.0	4.158	4.3
7	1658.3	4.148	15.7
8	1657.2	4.146	16.8
9	1651.3	4.131	47.6
10	1650.2	4.128	47.1
11	1644.0	4.113	50.3
12	1643.2	4.110	47.1
13	1637.0	4.095	19.2
14	1632.2	4.083	4.9
15	1462.7	3.659	3.4
16	1347.9	3.372	8.4
17	1266.7	3.169	46.2
18	1003.4	2.510	121.3
19	1001.7	2.506	159.7
20	999.9	2.501	121.5
21	763.6	1.910	13.2
22	488.0	1.221	83.8
23	481.0	1.203	171.7
24	473.8	1.185	82.0
25	0.0	0.000	2.8



Identification by Infrared spectrometry (IR)



Sample Name:

Experiment:IR-34.xpm

Lot No./Batch No:

Resolution:4

Date & Time: 06-07-2026,21:02:36

Sample Scans:16

Operator Name:Accu Chemist

Frequency Range:4000 to 500



Identification by Infrared spectrometry (IR)

C:\Users\Public\Documents\Bruker\OPT	
Peak Table TR	
Peak Picking	
Peak Picking	Values
Method:	Standard
Searched for minima:	Yes
Number of peaks:	22
Sensitivity > [%]:	5.000000
From:	3981.400000
to:	520.000000
Absolute peak height >	0.000000
Relative peak height < [%]	0.000000
Absolute peak height <	0.000000

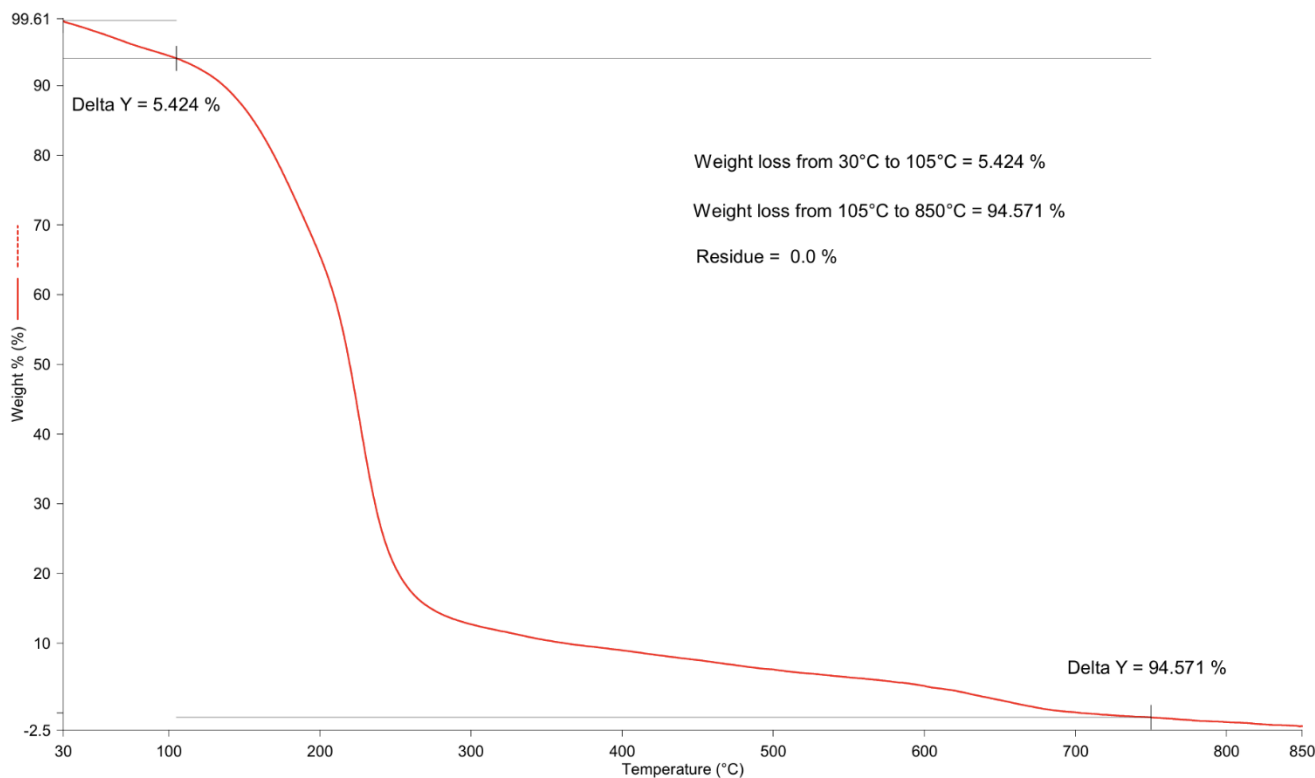
Wavenumber	Abs. intensity	Rel. intensity	Width	Found if threshold <	Shoulder
3389.6700	0.735	0.263	703.8519	40.376343	0
1726.8409	0.353	0.647	60.2822	99.962418	0
1372.0515	0.812	0.074	23.8109	9.142873	0
1217.3883	0.499	0.406	108.0119	60.243511	0
1127.5180	0.442	0.265	22.7208	38.530922	0
1084.1008	0.413	0.586	77.8966	90.367294	0
1018.4608	0.719	0.219	23.7016	32.693588	0
861.6617	0.929	0.071	18.5065	11.024353	0
827.9636	0.942	0.052	21.5503	7.580953	0
679.0577	0.859	0.130	47.1757	17.795511	0
595.8070	0.877	0.090	39.6904	13.332141	0
2986.2396	0.828	0.035	40.7105	100.041382	0
2939.6551	0.840	0.008	91.5565	10.759767	0
2369.5124	0.973	0.001	2135.1009	2.150538	0
1636.0912	0.812	0.061	154.7133	5.361631	0
1443.5757	0.867	0.026	30230.0337	4.348383	0
1395.1697	0.847	0.007	5757.5577	0.692426	0
892.3559	0.969	0.018	21.3284	19.898525	0
892.3559	0.969	0.018	21.3284	19.898525	0
892.3559	0.969	0.018	21.3284	19.898525	0
779.8261	0.995	0.005	38.1033	4.520715	0

Peak Picking Values				
Wavenumber	Abs. intensity	Rel. intensity	Width	Found if threshold < Shoulder
2618.8160	0.924	0.008	2300.1052	52.319138 0



Loss of drying by TGA

Filename: D:\TGA RAW DATA...LTABF0704
Data Collected: 06-07-2026 22:15:30
Operator ID: ACCU
Sample ID: LTABF0704
Sample Weight: 1.203 mg
Comment: NA



06-07-2026 22:23:13

1) Heat from 30.00°C to 600.00°C at 20.00°C/min

2) Heat from 600.00°C to 860.00°C at 20.00°C/min

