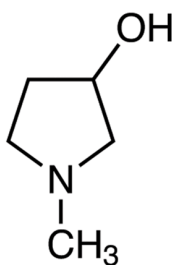


CERTIFICATE OF ANALYSIS

Product Name	1-Methyl-3-pyrrolidinol, GC standard		
Synonyms	3-Hydroxy-1-methylpyrrolidine		
CAS No	13220-33-2		
Product code	SYI0062	Batch No	LMEBF0911
Molecular Formula	C ₅ H ₁₁ NO	Molecular Weight	101.15
Mfg. Date	Sep-26	Expiry Date	Aug-29
Storage Conditions	Store at room temperature, tightly closed container		

Test	Specification	Results
Description	Colorless to Light yellow clear liquid	Light yellow clear liquid
Boiling Point	75 °C	75 °C
Specific Gravity at 20°C	0.99 g/ml	0.99 g/ml
Purity by GC	≥99.00%	99.97%
IR Spectrum	Identification by structure	Confirmed
¹H NMR Spectra	Identification by structure	Confirmed
Mass Spectra	Identification by molecular weight	Confirmed

Reference to *USP 30–NF 25* General Chapter <11>, "Reference Standards," As a result, noncompendial (secondary) reference standards require characterization data. This product should not use for clinical application.



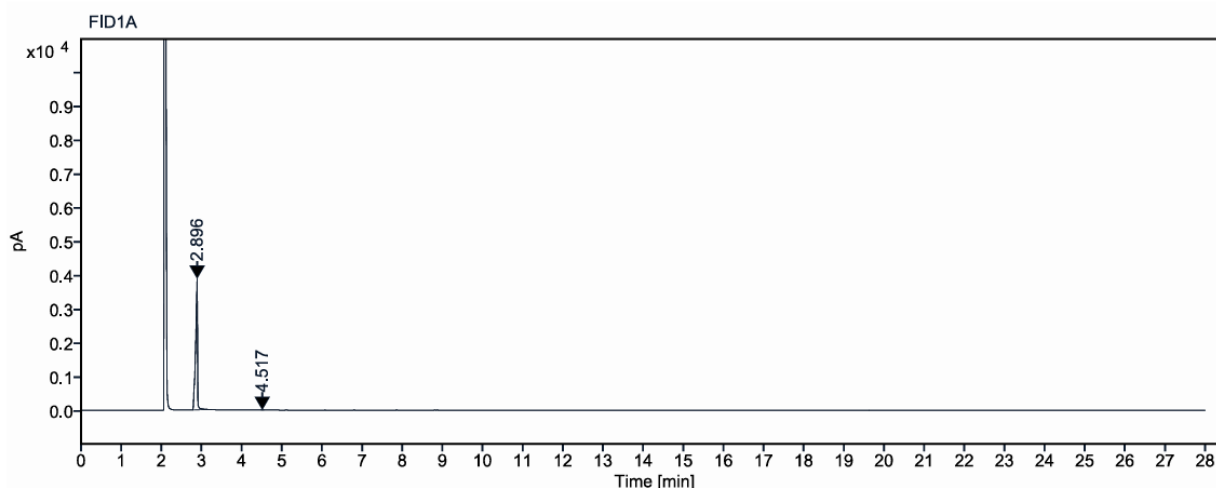
Approved by
Dr. Gopinath PH. D



Computer Generated document, Does not require any Signature.

ANALYTICAL GC REPORT

Data file: LMEBF0911.dx
Method Name: HP-5-GENERAL-METHOD.amx
Sample Name: LMEBF0911
Injection Acquired Date 2026-09-21 17:59:17+05:30
Injection Processed Date 2026-09-21 18:55:03+05:30
Inj. volume: 0.500 µL
Vial Number: 104
Data File Directory: /2026/SEP-2026/Results/21092026/20260921 172737008.rslt
Injection Column Name HP-5
Instrument ID SA/AD/INS/037



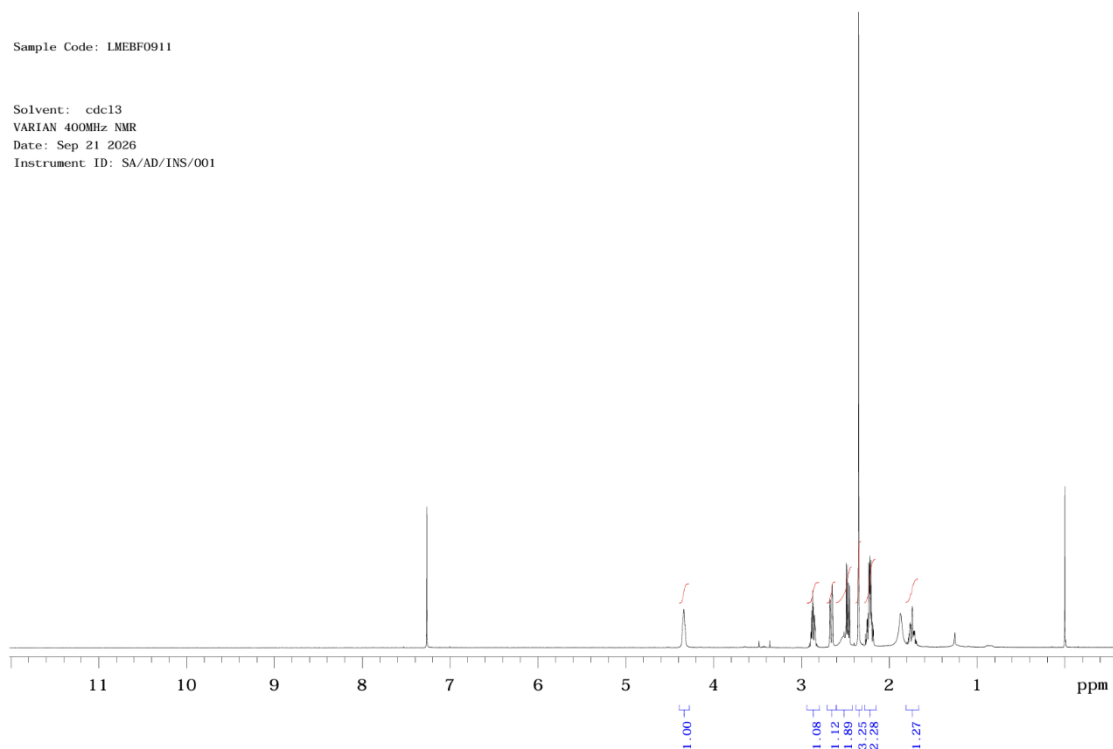
RT[MIN]	AREA	AREA %
2.896	12003.084	99.97
4.517	3.884	0.03



Identification by NMR: H1NMR

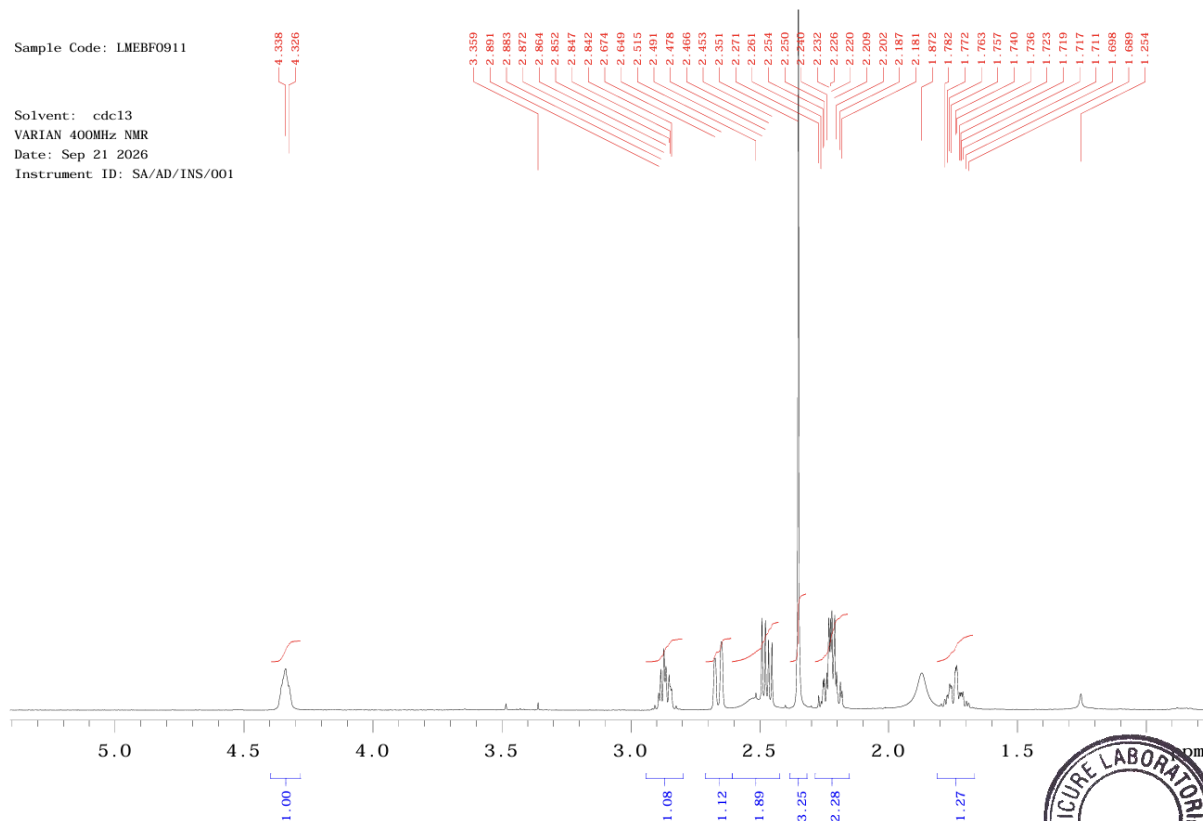
Sample Code: LMEBF0911

Solvent: cdc13
VARIAN 400MHz NMR
Date: Sep 21 2026
Instrument ID: SA/AD/INS/001



Sample Code: LMEBF0911

Solvent: cdc13
VARIAN 400MHz NMR
Date: Sep 21 2026
Instrument ID: SA/AD/INS/001



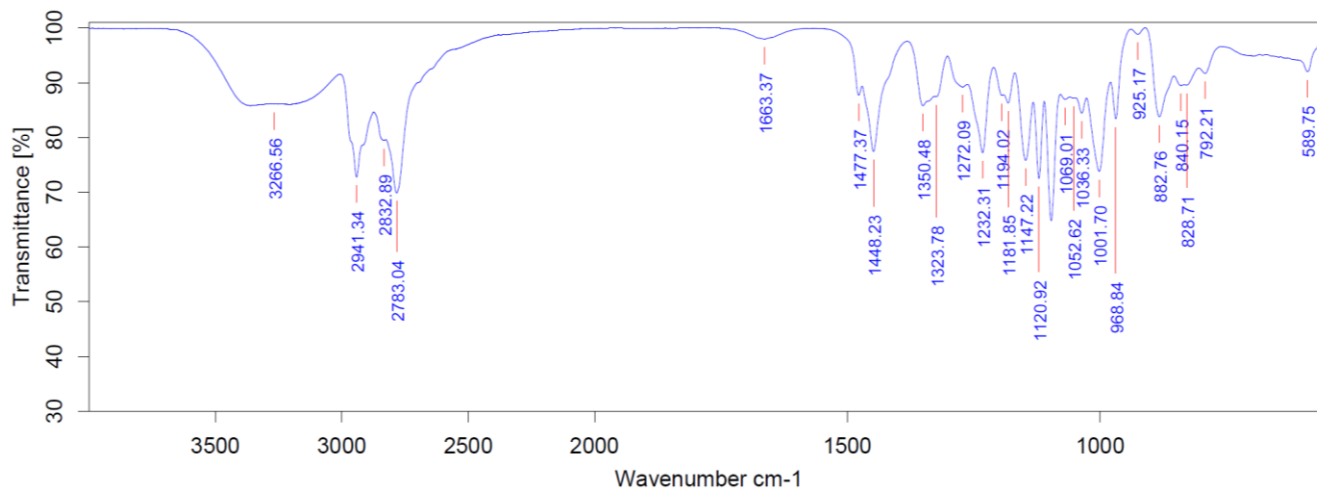
Identification by NMR: H1NMR

exp1 PROTON

SAMPLE				PRESATURATION				INDEX	FREQUENCY	PPM	HEIGHT	INDEX	FREQUENCY	PPM	HEIGHT
date	Sep 21 2026	satmode	n					1	2904.3	7.266	31.6	35	704.7	1.763	5.5
solvent	cdc13	wet	n					2	1734.0	4.338	8.6	36	702.3	1.757	5.1
file	/home/SPARK/d-							3	1728.8	4.326	5.1	37	695.4	1.740	8.9
ata/2026/Sep/LMEBF~		SPECIAL						4	1342.7	3.359	1.6	38	694.0	1.736	9.3
0911_20260921_01/L~	temp	not used						5	1155.7	2.891	3.6	39	688.8	1.723	3.7
MEBF0911_PROTON_20~	gain	34						6	1152.5	2.883	8.4	40	687.1	1.719	3.6
260921_01.fid	spin	20						7	1147.8	2.872	12.8	41	686.4	1.717	3.6
ACQUISITION	hst	0.008						8	1144.7	2.864	9.1	42	684.0	1.711	3.8
sw	8012.8	pw90	13.700					9	1139.8	2.852	7.3	43	678.6	1.698	1.9
at	4.089	10.000						10	1137.8	2.847	5.0	44	675.2	1.689	1.5
np	65536	alfa						11	1135.9	2.842	4.4	45	501.3	1.254	3.4
fb	4000	FLAGS						12	1068.6	2.674	10.8	46	-0.0	-0.000	36.3
bs	2							13	1058.8	2.649	14.2	47	-3.2	-0.008	1.6
d1	1.000							14	1005.3	2.515	3.6				
nt	128							15	995.7	2.491	19.0				
ct	18	PROCESSING						16	990.4	2.478	18.6				
tn	H1	0.50						17	985.5	2.466	14.6				
sfrq	399.688	fn	not used					18	980.3	2.453	14.0				
tof	1199.1	DISPLAY						19	939.5	2.351	225.5				
tpwr	59							20	907.7	2.271	3.0				
pw	6.850							21	903.8	2.261	1.9				
DECOUPLER	rp							22	900.9	2.254	6.2				
dn	C13							23	899.1	2.250	6.5				
dof	0							24	895.2	2.240	7.8				
dm	nnn	PLOT						25	892.1	2.232	19.1				
decwave	W40_GATB-0~							26	889.6	2.226	19.0				
12	vs							27	887.4	2.220	20.7				
dpwr	35							28	883.0	2.209	19.7				
dmf	29412							29	880.1	2.202	8.0				
	ai	cdc	ph					30	874.2	2.187	5.8				
								31	871.8	2.181	4.0				
								32	748.0	1.872	7.7				
								33	712.1	1.782	2.3				
								34	708.2	1.772	3.2				



Identification by Infrared Spectroscopy (IR)



Path/File Name:D:\2026\SEP-2026\LMEBF0911.0

Sample Name:LMEBF0911

Lot No./Batch No:LMEBF0911

Date & Time:9/21/2026,3:30:13 PM

Operator Name:SPARK

Experiment:SEP-2026.XPM

Resolution:2

Sample Scans:16

Frequency Range:4000 to 550



Identification by Mass spectrometry (MS)

