

Certificate of Analysis

N,N-Dimethylformamide

PurTech Standard for GC

(Secondary Reference Standard)

Product Number	PSI030	CAS No.	68-12-2
Brand	PureSynth	Lot No.	N28275P
Molecular Formula	C ₃ H ₇ NO	Date of Mfg.	March,2025
Molecular Weight	73.10 g/mol	Date of Exp.	February,2030

Test	Specification	Result
Description	Colorless liquid	Colorless liquid
Clarity	Clear	Clear
Assay (By GC-FID)	≥ 99.5 %	99.98 %
Water (By KF)	NMT 0.200 %	0.099 %
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 1601500, Lot no: R148U0.**

Storage Condition: Store at ambient temperature and keep the container tightly closed in a dry and well-ventilated place.

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

Assay by GC-FID

METHOD: GC- FID conditions:

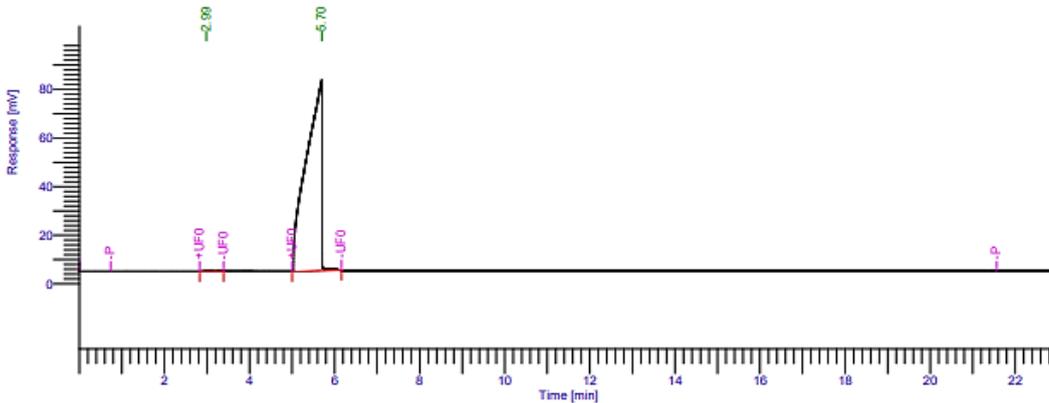
Column: Agilent Technologies DB-FFAP 30mx 0.530mm, 1.0micron

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	: 08-04-2025 16:40:19
Operator	: manager	Sample Name	: N_N-DIMETHYL FORMAMIDE-N2827
Sample Number	: 001		5P
AutoSampler	: BUILT-IN	Study	:
Instrument Name	: Clarus 690	Rack/Vial	: 0/23
Instrument Serial #	: None	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	Area Reject	: 0.000000
Data Acquisition Time	: 08-04-2025 16:10:21	Dilution Factor	: 1.00
		Cycle	: 1



GC Reports

Peak #	Component Name	Time [min]	Area [uV*sec]	Height [uV]	Area [%]
1		2.985	369.69	22.67	0.02
2		5.697	1963176.38	78570.72	99.98
			1963546.07	78593.39	100.00

Missing Component Report
Component Expected Retention (Calibration File)

All components were found

Purity by GC-FID: 99.98 %

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: N,N-Dimethylformamide

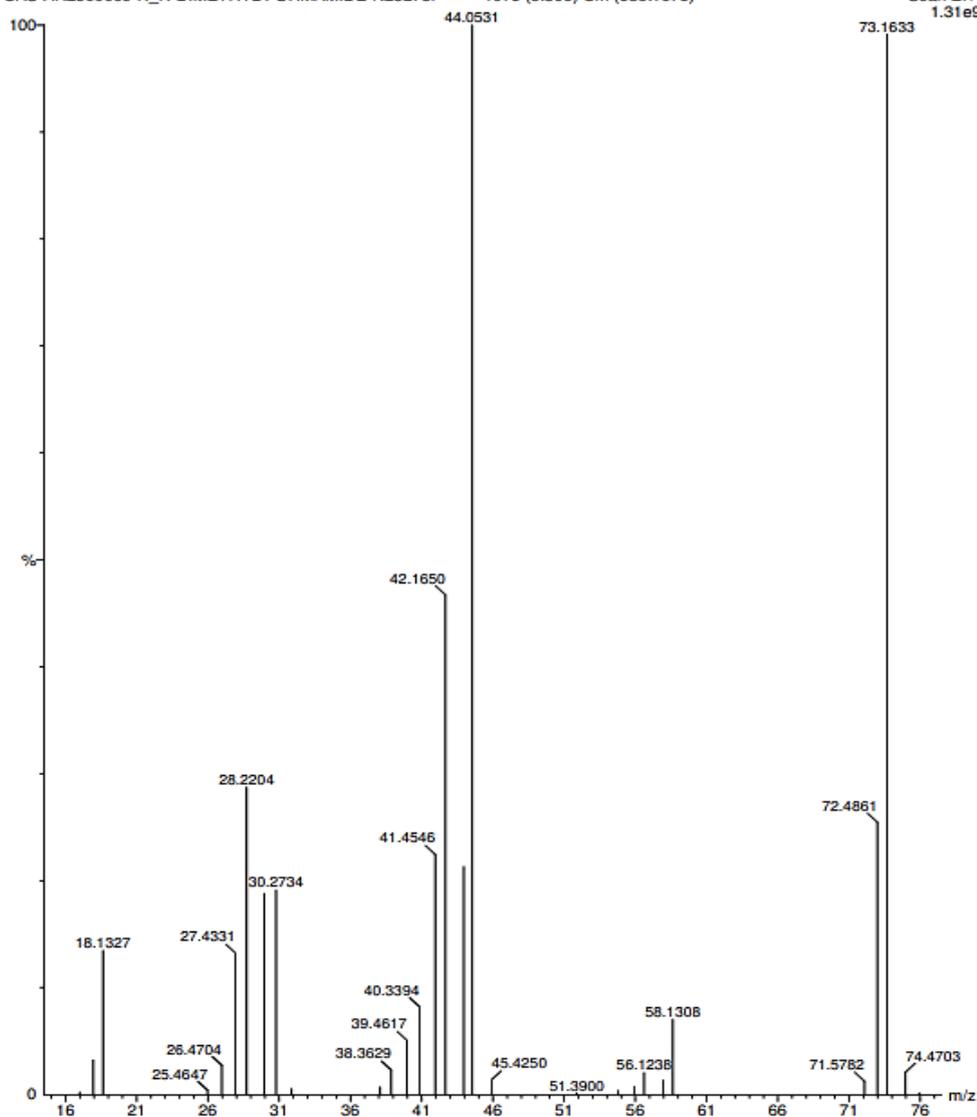
Product Code: PS1030

N,N-DIMETHYL FORMAMIDE-N28275P

CAS-AR2500069-N,N-DIMETHYL FORMAMIDE-N28275P

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Identification by GC-MS: Conforms to molecular mass

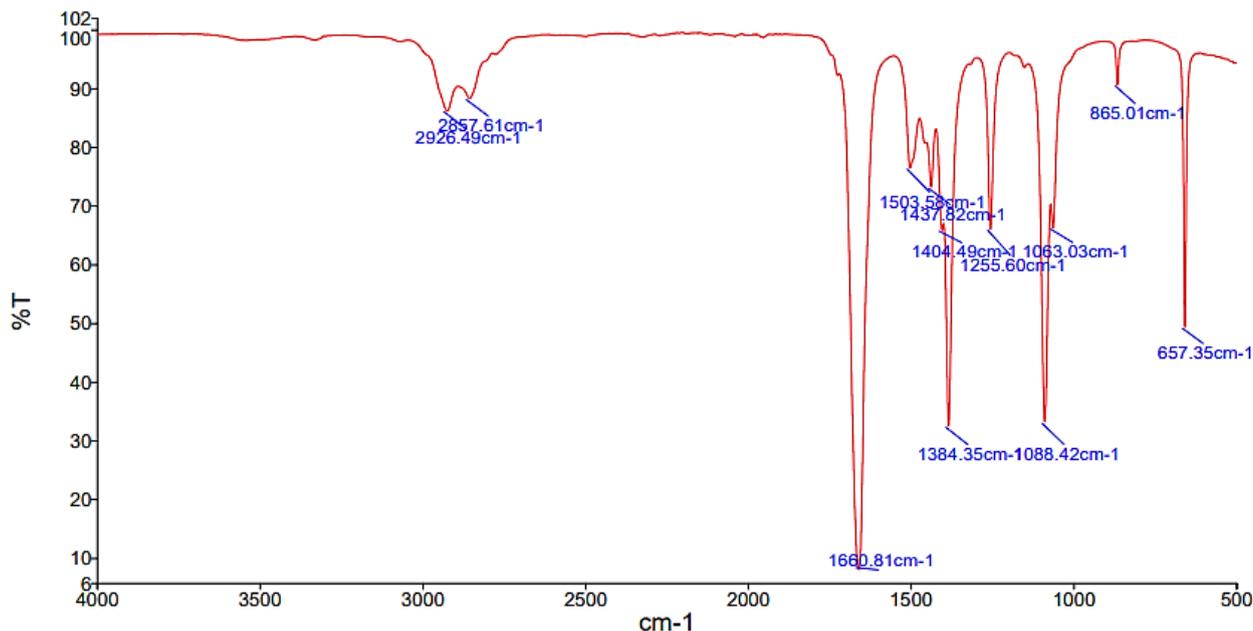
Infrared spectrum:

Product Name: N,N-Dimethylformamide

Product Code: PSI030

Analyst
Date

Analyst
08 April 2025 15:38



CAS-AR2500069-N,N-Dimethylformamide-N28275P _1 Sample 199 By Analyst Date Tuesday, April 08 2025

Source Spectra Results		
Spectrum Name	Number Of Peaks	
CAS-AR2500069-N,N-Dimethylformamide-N28275P	12	
List of Peak Area/Height		
Peak Number	X (cm-1)	Y (%T)
1	2926.49	86.34
2	2857.61	88.42
3	1660.81	8.05
4	1503.58	76.57
5	1437.82	73.31
6	1404.49	65.97
7	1384.35	32.58
8	1255.60	66.13
9	1088.42	33.24
10	1063.03	66.33
11	865.01	90.78
12	657.35	49.43

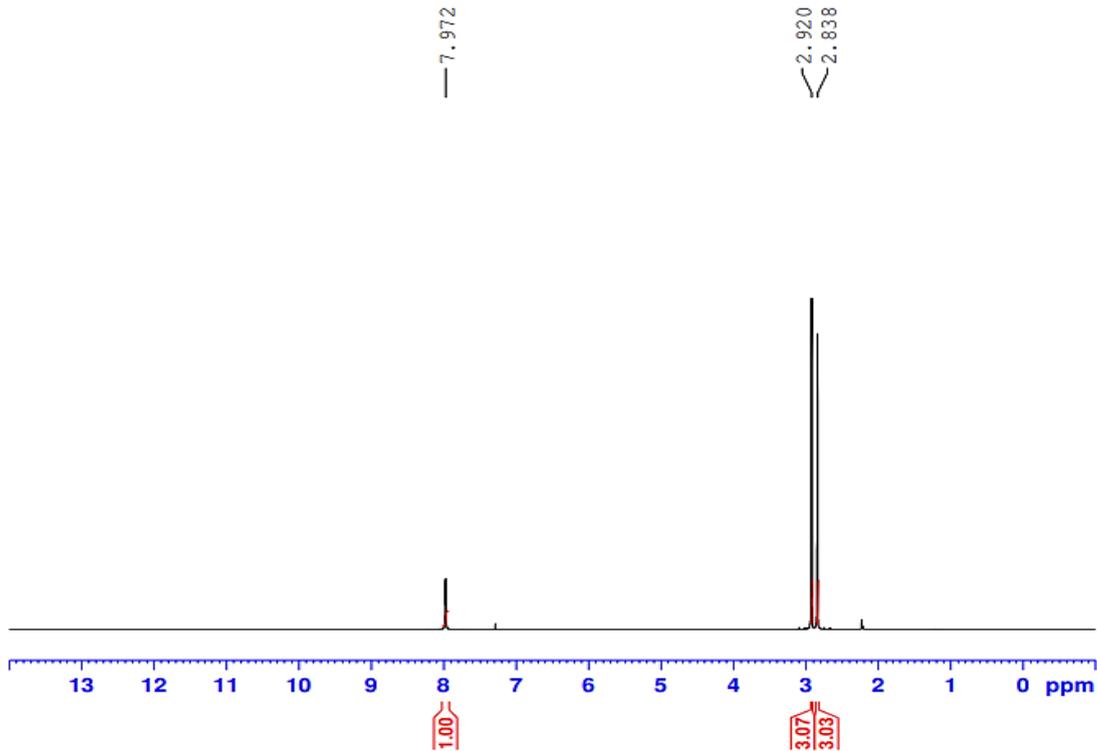
Identification by IR: Conforms to structure

¹H NMR Spectrum:

Product Name: N,N-Dimethylformamide

Product Code: PSI030

N,N-Dimethylformamide
Batch no- N28275P
¹H-NMR in CDCL₃



Identification by ¹H NMR: Conforms to structure

Maximum limits of impurities

WATER DETERMINATION

Method: Karl Fisher titration

Water Content (PSI030) = **0.099 %**

Approved By
Head - Technical

This is a computer-generated report -does not required sign

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