

Certificate of Analysis

N-Nitrosodibutylamine

Product Number	PSR37123	CAS No.	924-16-3
Brand	PureSynth	Lot No.	N37123CS1223
Molecular Formula	C ₈ H ₁₈ N ₂ O	Date of Mfg.	December,2023
Molecular Weight	158.24 g/mol	Date of Exp.	November,2027

Test	Specification	Result
Description	Light yellow to yellow oil	Light yellow oil
Assay (GC-FID)	≥ 99.5 %	99.96 %
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

Storage Condition: Store at a temperature of 2-8°C and keep the container tightly closed.

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

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Worldwide Helpline No. 1800-120-1234-34 , Email: info@pure-synth.com , Website: www.pure-synth.com

Assay by GC-FID

METHOD: GC- FID conditions:

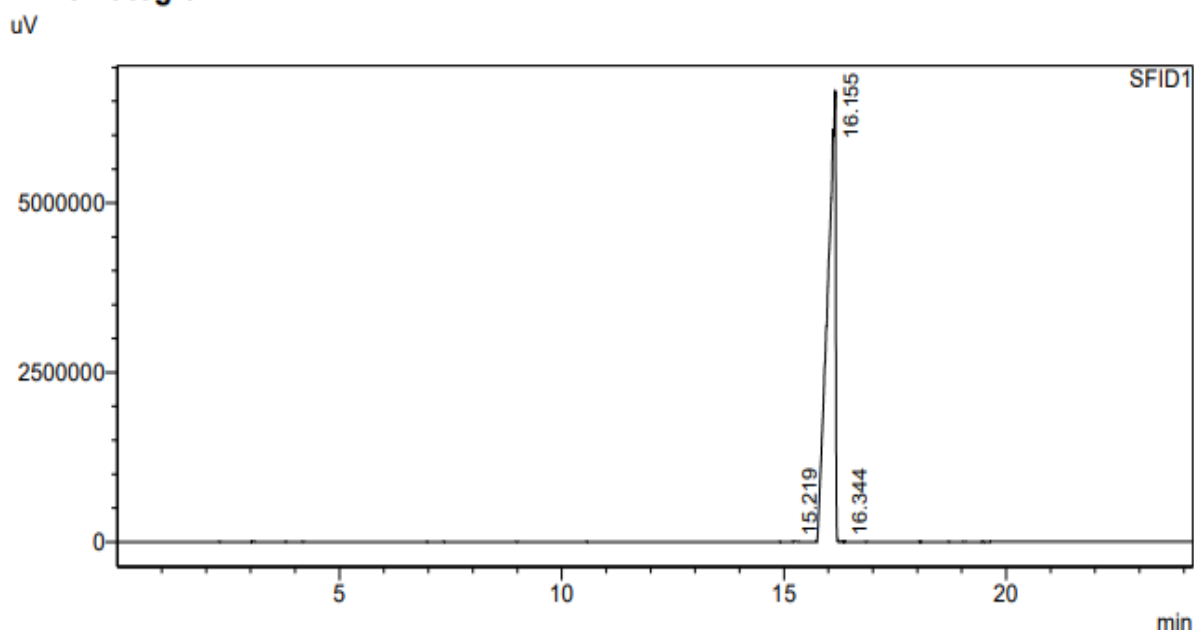
Column: Agilent Technologies DB-FFAP 30mx 0.530mm, 1.0micron

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.

<Chromatogram>



<Peak Table>

SFID1

Peak#	Ret. Time	Area	Height	Area%
1	15.219	14725	5093	0.018
2	16.155	83165844	6648815	99.964
3	16.344	15480	11106	0.019
Total		83196049	6665014	100.000

Purity by GC-FID: 99.96 %

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-Nitrosodibutylamine

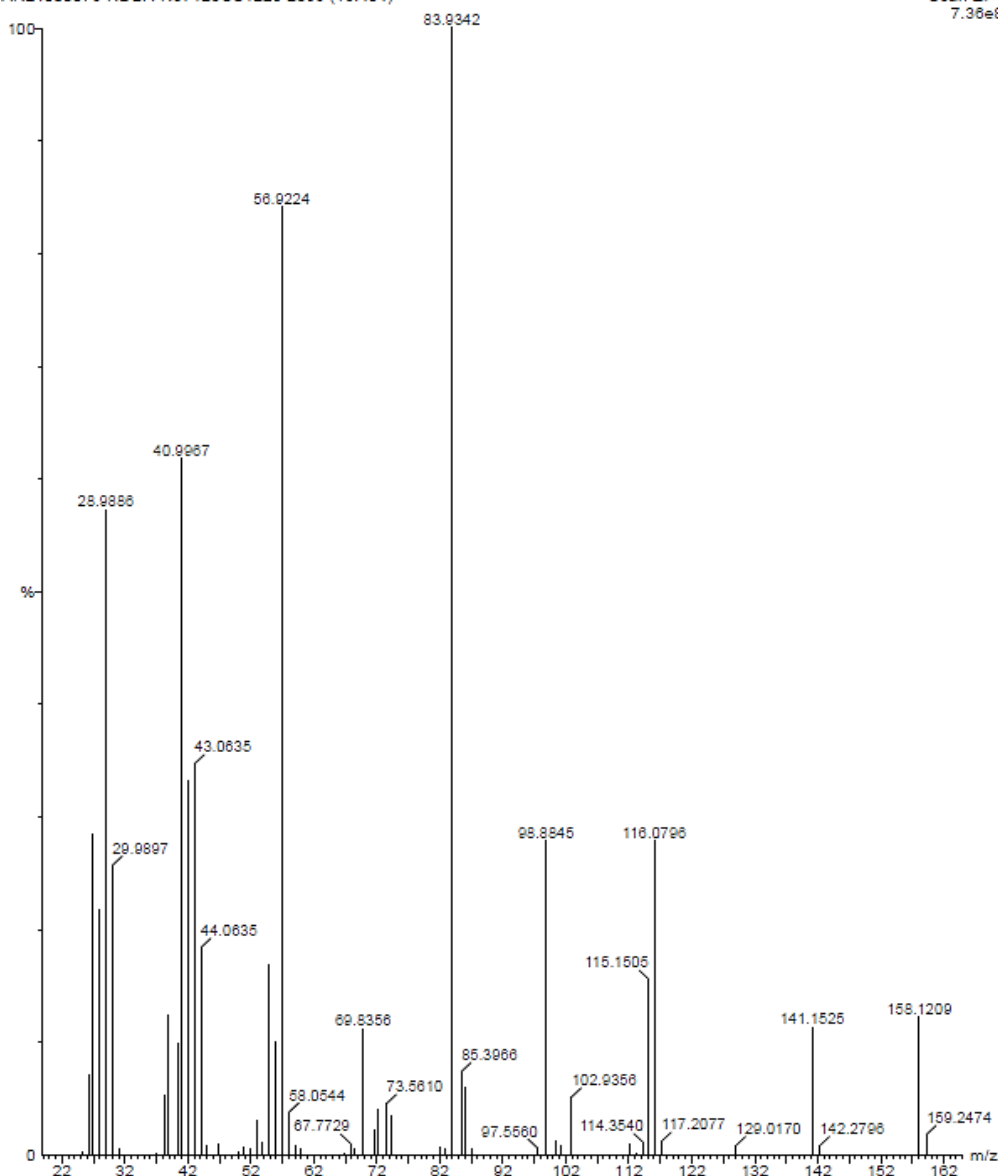
Product Code: PSR37123

NDBA-N37123CS1223

AR24000076-NDBA-N37123CS1223 2896 (16.484)

, 05-Feb-2024 + 15:06:35

Scan EI+
7.36e8



Identification by GC-MS: Confirms to molecular mass

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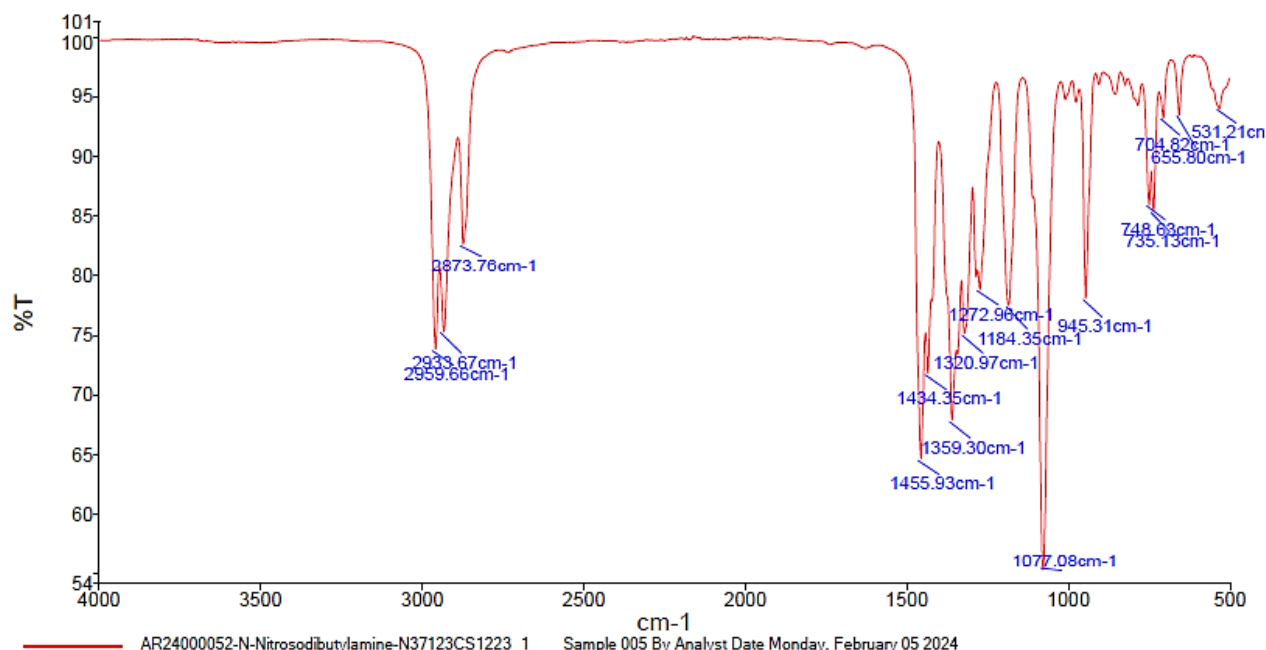
Infrared spectrum:

Product Name: N-Nitrosodibutylamine

Product Code: PSR37123

Analyst
Date

Analyst
05 February 2024 16:04



AR24000052-N-Nitrosodibutylamine-N37123CS1223_1

Sample 005 By Analyst Date Monday, February 05 2024

Source Spectra Results		
Spectrum Name		Number Of Peaks
AR24000052-N-Nitrosodibutylamine-N37123CS1223_1		16
List of Peak Area/Height		
Peak Number	X (cm-1)	Y (%T)
1	2959.66	73.84
2	2933.67	75.33
3	2873.76	82.63
4	1455.93	64.62
5	1434.35	71.81
6	1359.30	67.89
7	1320.97	75.14
8	1272.96	78.86
9	1184.35	77.52
10	1077.08	55.31
11	945.31	78.10
12	748.63	85.97
13	735.13	85.40
14	704.82	93.24
15	655.80	93.53
16	531.21	94.03

Identification by IR: Conforms to structure

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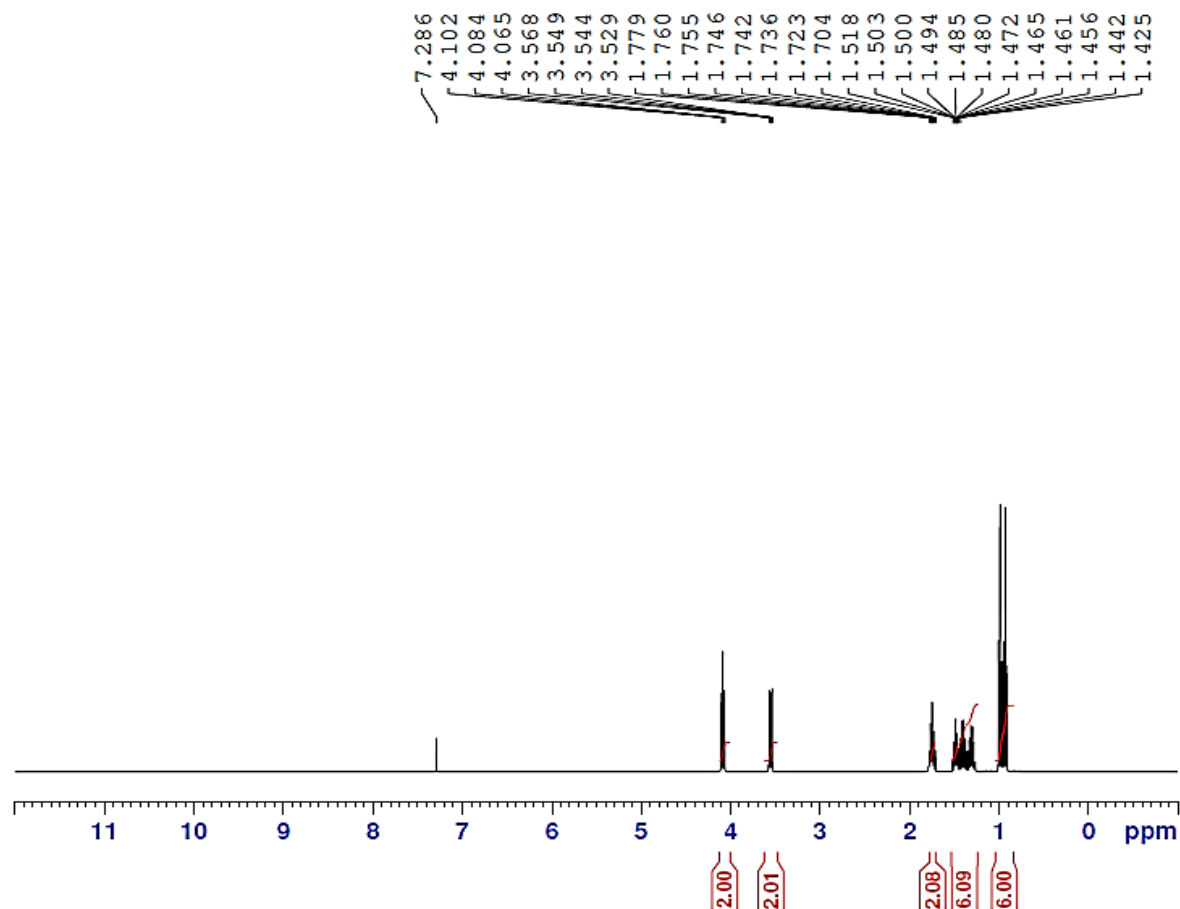
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¹H NMR Spectrum:

Product Name: N-Nitrosodibutylamine

Product Code: PSR37123

N-Nitrosodibutylamine (NDBA)
B.NO-N37123CS1223
¹H-NMR in CDCL₃



Identification by ¹H NMR: Conforms to structure

Approved By
Head - Technical