

Certified Reference Material

This certificate is designed in accordance with ISO 17034 and ISO Guide 31. This certified reference material (CRM) was designed, produced and verified in accordance with ISO/IEC 17025, ISO 17034 and a registered quality management system ISO 9001.

Product Name

N-Nitroso-di-n-butylamine 1000 µg/mL in Methanol

Product Code
DRE-YA15602500ME

Lot Number
H1066503ME

CAS No.
924-16-3

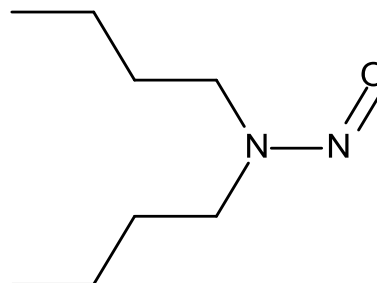
Format
Solution

Mol. Weight
158.24

Expiry Date
10 Mar 2025

Mol. Formula
C₈H₁₈N₂O

Storage Temp
20°C ± 4°C



CERTIFIED Concentration 1000.00 µg/mL	CERTIFIED Expanded Uncertainty (U) 24.52 µg/mL
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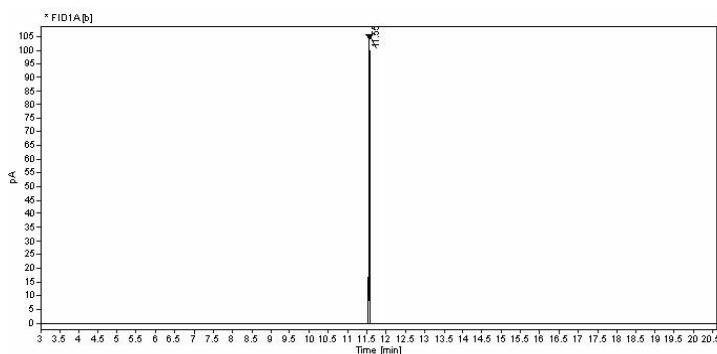
Uncertainty

The certified value(s) and uncertainty(ies) are determined in accordance with ISO 17034 with an 95% confidence level (k=2). Uncertainty is based on the Total Combined Uncertainty, including uncertainties of preparation, purity of neat materials, homogeneity and stability testing. Stability values are based on real evidence opposed to simulation.

The producer certifies that this certified reference material meets the specification stated in this certificate until the expiry date, provided it is stored unopened at the recommended temperature herein. Product warranties for this certified reference material are set out in the terms and conditions of purchase.

CERTIFIED BY	CERTIFIED ON	SIGNATURE	STATUS
N. Müller	10 Mar 2020	<i>N.M.</i>	RM Release

CHROMATOGRAM



Nr.	RT [min]	Area [pA*s]	Height [pA]	Area%	Width [min]
1	11.55	141.60987	103.62	100	0.022

Instrument

GC/FID

Detection

FID

Column

Optima-5MS, 0.25 µm, 0.25 mm

Method Details

Initial Temp: 60°C / 5 min, End Temp: 280°C / 1 min, Gradient: 15°C/min

Inj.-Vol.

1.0 µL

Flow

1 mL/min

Method of Preparation

The certified value is based on gravimetric and volumetric preparation of this CRM. This CRM has been confirmed by the appropriate analytical techniques.

Batch Information

Solvent: Methanol, Lot No. V8F518048G48, 230.00 mL.

Gravimetric Data

Compound Name	Lot No.	Weight (mg)	Purity (%)
N-Nitroso-di-n-butylamine	132028	231.389	99.4

Intended Use

This CRM is intended for use in a laboratory as a calibration and quality control standard or in method development for analytical techniques.

Safety

Proper precautions should be observed while handling. See Safety Data Sheet.

Traceability

The balances used for gravimetric measurements are calibrated with weights traceable to the national standards (DKD). The calibration of

the balances is verified daily internally and annually by an external accredited calibration service. Chromatographic methods are traceable to the International System of Units (SI).

Homogeneity

Random replicate samples of the final packaged CRM have been analysed to prove homogeneity compliant with ISO 17034.

Storage

The CRM should be stored in the original sealed container at the indicated temperature.

Instructions for use

The CRM should be used shortly after opening to avoid concentration changes due to evaporation. It is recommended to use 1 mL as the minimum sample size and if less material is used, to increase the certified uncertainty by a factor of two for half sample and four for a quarter of sample. If storage after opening is necessary, the CRM should be tightly closed and kept from light and moisture. If the CRM was in a sealed ampoule, it should be transferred to a vial with minimum head space. Visit the support section of our website lgcstandards.com for a series of Dr. Ehrenstorfer Tech Tip videos and frequently asked questions.

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LGC Labor GmbH is accredited by
 DAkkS accreditation numbers
 D-RM-19883-01-00 & D-PL-19883-01-00
 on ISO 17034:2017 & ISO/IEC 17025:2018

