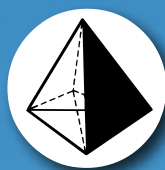


# Nitrosamine Standards



**AccuStandard<sup>®</sup>**

# Nitrosamines in Food and Pharmaceuticals

As a "Process Contaminant", N-nitrosamines form as a byproduct during the manufacturing of food and pharmaceuticals. Due to its known carcinogenic and genotoxic characteristics, selective analysis for different Nitrosamines is important to reduce consumer's exposure to these toxic contaminants.

## FDA Method - Nitrosamine Impurities in Drugs

FDA-001S

100 µg/mL each in Methanol

1 mL

8 comps.

N-Nitrosodimethylamine	N-Nitrosodi-n-propylamine
N-Nitrosodiethylamine	N-Nitroso-N-methylaniline
N-Nitroso-N-ethyl-2-propanamine	N-Nitrosodi-n-butylamine
N-Nitrosodiisopropylamine	N-Nitroso-N-methyl-4-aminobutyric acid

## Nitrosamine Compounds

Compound	CAS No.	Conc. (µg/mL)	Matrix	Cat. No.	Unit
N-Nitroso fluoxetine	150494-06-7	100	MeOH	NAS-016S	1 mL
N-Nitrosodicyclohexylamine	947-92-2	100	MeOH	NAS-017S	1 mL
N-Nitroso-N-methyl-4-aminobutyric acid	61445-55-4	100	MeOH	NAS-018S	1 mL
N-Nitroso-diterbutylamine	63819-70-5	100	MeOH	NAS-019S	1 mL
N-Nitrosodiethanolamine	1116-54-7	100	MeOH	NAS-020S	1 mL
1-Cyclopentyl-4-nitrosopiperazine (CPNP)	61379-66-6	100	MeOH	NAS-021S	1 mL
1-Methyl-4-nitrosopiperazine (MNP)	16339-07-4	100	MeOH	NAS-022S	1 mL
N-Nitrosodiisopropylamine (NDIPA)	601-77-4	100	MeOH	NAS-023S	1 mL
N-Nitroso-N-ethyl-2-propanamine (NEIPA)	16339-04-1	100	MeOH	NAS-024S	1 mL
N-Nitrosodiisobutylamine (NDIBA)	997-95-5	100	MeOH	NAS-025S	1 mL
N-Nitrososarcosine (NSAR)	13256-22-9	100	MeOH	NAS-026S	1 mL
N-Nitroso-N-methylaniline (NMPA)	614-00-6	100	MeOH	NAS-027S	1 mL
N-Nitrosodi-n-propylamine-d14	93951-96-3	100	MeOH	NAS-D-001S	1 mL
N-Nitrosodiethylamine-d10	1219794-54-3	100	MeOH	NAS-D-003S	1 mL
N-Nitrosodi-n-butylamine-d18	1219798-82-9	100	MeOH	NAS-D-002S	1 mL
N-Nitrosodimethylamine-d6	17829-05-9	100	MeOH	NAS-D-004S	1 mL
N-Nitrosodiethanolamine-d8	1173019-53-8	100	MeOH	NAS-D-020S	1 mL
N-Nitrosodi-n-butylamine	924-16-3	100	CH2Cl2	APP-9-147	1 mL
		2000	CH2Cl2	APP-9-147-20X	1 mL
N-Nitrosodiethylamine	55-18-5	100	CH2Cl2	APP-9-148	1 mL
		2000	CH2Cl2	APP-9-148-20X	1 mL
N-Nitrosodimethylamine	62-75-9	100	CH2Cl2	APP-9-149	1 mL
		1000	MeOH	APP-9-149-M-10X	1 mL
N-Nitrosodiphenylamine	86-30-6	100	CH2Cl2	APP-9-150	1 mL
		1000	MeOH	APP-9-150-M-10X	1 mL
N-Nitrosodi-n-propylamine	621-64-7	100	CH2Cl2	APP-9-151	1 mL
		2500	CH2Cl2	APP-9-151-25X	1 mL
N-Nitrosomethylethylamine	10595-95-6	100	CH2Cl2	APP-9-152	1 mL
N-Nitrosodi-n-propylamine	621-64-7	5000	MeOH	AS-E0060	1 mL
N-Nitrosodiphenylamine	86-30-6	5000	MeOH	AS-E0061	1 mL
N-Nitrosodiethylamine	55-18-5	5000	MeOH	AS-E0334	1 mL
N-Nitroso-N-methyl ethylamine	10595-95-6	1000	MeOH	AS-E0974	1 mL
N-nitrosodi-n-propylamine-d14	93951-96-3	1000	CH2Cl2	M-521-IS	1 mL
N-Nitrosodimethylamine-d6	17829-05-9	1000	CH2Cl2	M-521-SS	1 mL
N-Nitrosodi-n-butylamine	924-16-3	500	Water	M-8015B-5031-20	1 mL

## ASTM Method D8456 - Nitrosamines in Water

ASTM D8456 is designed to test for N-nitrosamines in groundwater, surface water, wastewater influents, and wastewater effluents.

### Nitrosamines in Water

D-8456

2 µg/mL each in Water:Methanol (98:2)

1 mL

13 comps.

N-Nitrosodimethylamine	N-Nitrosodiethylamine	N-Nitrosodi-n-propylamine
N-Nitrosomorpholine	N-Nitrosopiperidine	N-Nitrosodi-n-butylamine
N-Nitroso-N-methyl-4-aminobutyric acid	N-Nitroso-N-ethyl-2-propanamine	N-Nitroso-N-methylaniline
N-Nitrosopyrrolidine	N-Nitrosodiisopropylamine	N-Nitrosodiphenylamine
N-Nitrosoethylmethylamine		

### Nitrosamines in Water - Internal Standard

D-8456-IS

2 µg/mL each in Water:Methanol (98:2)

1 mL

2 comps.

N-Nitrosodimethylamine-d6      N-Nitrosodiethylamine-d10



# Nitrosamine USEPA and EU Methods

The USEPA has developed multiple test methods for the determination of Nitrosamines in drinking water, underground water and municipal and industrial wastewater. Monitoring contaminants such as NDMA, NDEA and other emerging nitrosamines is important for both regulation compliance as well as reducing exposure to these toxins.

## EPA Method 521 - Nitrosamines in Drinking Water by SPE and Capillary Column GC

### Analyte Stock Solution

**M-521**  
200 µg/mL each in CH<sub>2</sub>Cl<sub>2</sub>

N-Nitrosodimethylamine  
N-Nitrosomethylethylamine  
N-Nitrosodiethylamine  
N-Nitrosodi-*n*-propylamine

1 x 1 mL  
7 comps.

N-Nitrosodi-*n*-butylamine  
N-Nitrosopyrrolidine  
N-Nitrosopiperidine

### Internal Standard Stock Solution

**M-521-IS**  
**M-521-IS-PAK** **SAVE**  
1.0 mg/mL in CH<sub>2</sub>Cl<sub>2</sub>

1 x 1 mL  
5 x 1 mL

N-Nitrosodi-*n*-propylamine-d<sub>14</sub>

### Surrogate Standard Stock Solution

**M-521-SS**  
**M-521-SS-PAK** **SAVE**  
1.0 mg/mL in CH<sub>2</sub>Cl<sub>2</sub>

1 x 1 mL  
5 x 1 mL

N-Nitrosodimethylamine-d<sub>6</sub>

## Method 607 - Nitrosamines in Wastewater by GC/NPD

### Nitrosamine Mix

**M-607**  
**M-607-PAK**  
At stated conc. (mg/mL) in MeOH

1 x 1 mL  
**SAVE** 5 x 1 mL  
3 comps.

N-Nitrosodimethylamine 0.2  
N-Nitrosodiphenylamine 0.4  
N-Nitrosodi-*n*-propylamine 0.2

## Method 8070A - Detection of Nitrosamines by NPD / Reductive Hall or TEA

### Nitrosamines

**M-8070**  
**M-8070-PAK**  
2.0 mg/mL each in MeOH

1 x 1 mL  
**SAVE** 5 x 1 mL  
3 comps.

N-Nitrosodimethylamine  
N-Nitrosodiphenylamine  
N-Nitrosodi-*n*-propylamine

### Nitrosamines Alternate Mix

**M-8270-03-ASL**  
2.0 mg/mL each in CH<sub>2</sub>Cl<sub>2</sub>

1 x 1 mL  
9 comps.

N-Nitrosodi-*n*-butylamine  
N-Nitrosodiethylamine  
N-Nitrosodimethylamine  
N-Nitrosodiphenylamine  
N-Nitrosodi-*n*-propylamine  
N-Nitrosomorpholine  
N-Nitrosopiperidine  
N-Nitrosopyrrolidine

## Method 8270 - Nitrosamines in Aqueous Matrices by Capillary Column GC-MS

### Semi-Volatile by Capillary Column GC/MS Mix 1

**M-8270-01**  
2 mg/mL each in CH<sub>2</sub>Cl<sub>2</sub>

1 x 1 mL  
17 comps.

Aniline  
Benzyl alcohol  
bis(2-Chloroethyl) ether  
bis(2-Chloroisopropyl)ether  
2-Chlorophenol  
1,2-Dichlorobenzene  
1,3-Dichlorobenzene  
1,4-Dichlorobenzene  
Ethylmethanesulfonate  
Hexachloroethane  
Methylmethanesulfonate  
*o*-Cresol  
*p*-Cresol  
N-Nitrosodimethylamine  
N-Nitrosodi-*n*-propylamine  
Phenol  
2-Picoline

### Semi-Volatile by Capillary Column GC/MS Mix 2

**M-8270-02**  
2 mg/mL each in CH<sub>2</sub>Cl<sub>2</sub>

1 x 1 mL  
18 comps.

Acetophenone  
Benzoic acid  
bis(2-Chloroethoxy)methane  
4-Chloroaniline  
4-Chloro-3-methylphenol  
2,4-Dichlorophenol  
2,6-Dichlorophenol  
α,α-Dimethylphenethylamine  
2,4-Dimethylphenol  
Hexachlorobutadiene  
Isophorone  
2-Methylnaphthalene  
Naphthalene  
Nitrobenzene  
2-Nitrophenol  
N-Nitroso-di-*n*-butylamine  
N-Nitrosopiperidine  
1,2,4-Trichlorobenzene

### Semi-Volatile by Capillary Column GC/MS Mix 2 Rev.

**M-8270-02-R1**  
2 mg/mL each in CH<sub>2</sub>Cl<sub>2</sub>

1 x 1 mL  
17 comps.

Acetophenone  
Benzoic acid  
bis(2-Chloroethoxy)methane  
4-Chloroaniline  
4-Chloro-3-methylphenol  
2,4-Dichlorophenol  
2,6-Dichlorophenol  
2,4-Dimethylphenol  
Hexachlorobutadiene  
Isophorone  
2-Methylnaphthalene  
Naphthalene  
Nitrobenzene  
2-Nitrophenol  
N-Nitrosodi-*n*-butylamine  
N-Nitrosopiperidine  
1,2,4-Trichlorobenzene

## EU Method EN 71-12 - Nitrosamines in Toys Reference Standard

EN 71-12 was published to provide test method specifications to help reduce N-Nitrosamines (N-NAs) exposure for children by quantifying traces of these dangerous toxins in toys such as finger paint and balloons.

**EN-7112**  
1000 µg/mL each in Methanol

1 x 1 mL  
13 comps.

N-Nitrosodi-*n*-butylamine  
N-Nitrosodiethylamine  
N-Nitrosodimethylamine  
N-Nitrosodi-*n*-propylamine  
N-Nitrosomorpholine  
N-Nitrosopiperidine  
N-Nitroso-N-methylaniline  
N-Nitroso-N-ethylaniline  
N-Nitrosodibenzylamine  
N-Nitrosodiisopropylamine  
N-Nitrosodiethanolamine  
N-Nitroso-N,N-di(3,5,5-trimethylhexyl)amine  
N-Nitrosodiisobutylamine



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