



BMF 55 - Nitrosamines and Nitramines

Chiron has built up a strong track record of supplying new reference standards since 1983. We are now proud to offer various nitrosamine and nitramine reference standards.

Our mission is to market highly purified calibrates in crystalline as well as standardized solutions for chemical analysis, including internal standards. Your benefits using our standards include:

- **Fast turnover time due to excellent service.**
- **Guaranteed high and consistent quality.**
- **Bulk quantities available on request.**
- **Custom solutions and custom synthesis on request.**
- **We continuously develop new and innovative products.**



It is well known that **nitrosamines and nitramines** can be dangerous to human health, animals and plant lives. There are several technologies which release them into the environment.

Nitrosamines are a class of chemical compounds that have received much attention since 1956, when two British scientists, John Barnes and Peter Magee, reported that dimethylnitrosamine produced liver tumors in rats. Nitrosamines are formed by reactions of nitrites and secondary amines (e.g. in proteins) under acidic conditions like gastric milieu. Human beings ingest nitrites **from food, esp. fried or grilled meat and vegetables. Disposal of tobacco products** also causes a high intake of nitrosamines (mainly N-Nitrosornicotin).

CO₂ capture causes a huge interest in these days. Solvents used for CO₂ capture are often a mixture of several amines according to the latest developments in this field. These amine compositions are not always known in detail. However, it is known that the amine blends for CO₂ capture are recycled, but as a side reaction/effect a certain percentage of the amines are either degraded or emitted to air. The released amines are often unstable on air, and degrade to toxic substances like nitrosamines and nitramines.

Nitramines

Chiron No.	Name	Appearance	QTY
9813.2-100MG	Dimethylnitramine	neat	100 mg
9812.2-100MG	2-Nitroaminoethanol	neat	100 mg
9907.2-100MG	N-Nitro-2-oxazolidone	neat	100 mg
9912.4-100MG	Diethylnitramine	neat	100 mg
9913.4-100MG	N-Nitropiperazine	neat	100 mg

Native nitrosamines for EPA 521

Chiron No.	Name	Description	Conc.	Solvent	QTY
9004.2-2K-DC	N-Nitrosodimethylamine	NDMA	2000µg/mL	DCM	1mL
9005.3-2K-DC	N-Nitrosomethylethylamine	NMEA	2000µg/mL	DCM	1mL
9006.4-2K-DC	N-Nitrosodiethylamine	NDEA	2000µg/mL	DCM	1mL
9007.6-2K-DC	N-Nitrosodi-n-propylamine	NDPA	2000µg/mL	DCM	1mL
9008.8-2K-DC	N-Nitrosodi-n-butylamine	NDBA	2000µg/mL	DCM	1mL
9009.4-2K-DC	N-Nitrosopyrrolidine	NPYR	2000µg/mL	DCM	1mL
9010.5-2K-DC	N-Nitrosopiperidine	NPIP	2000µg/mL	DCM	1mL

Please inquire for neat material.

Internal standards for EPA 621

Chiron No.	Name	Description	Conc.	Solvent	QTY
9011.2-K-DC	<i>N</i> -Nitrosodimethylamine-d6	NDMA-d6	1000µg/mL	DCM	1mL
9012.3-K-DC	<i>N</i> -Nitrosomethylethylamine-d3	NMEA-d3	1000µg/mL	DCM	1mL
9013.4-K-DC	<i>N</i> -Nitrosodiethylamine-d10	NDEA-d10	1000µg/mL	DCM	1mL
9014.6-K-DC	<i>N</i> -Nitrosodi- <i>n</i> -propylamine-d14	NDPA-d14	1000µg/mL	DCM	1mL
9015.8-K-DC	<i>N</i> -Nitrosodi- <i>n</i> -butylamine-d18	NDBA-d18	1000µg/mL	DCM	1mL
9016.4-K-DC	<i>N</i> -Nitrosopyrrolidine-d8	NPYR-d8	1000µg/mL	DCM	1mL
9017.5-K-DC	<i>N</i> -Nitrosopiperidine-d10	NPIP-d10	1000µg/mL	DCM	1mL

Other nitrosamines and internal standards

Chiron No.	Name	Description	Conc.	Solvent	QTY
1703.10-K-AN	4-(<i>N</i> -Methyl- <i>N</i> -nitrosamino)-1-(3-pyridyl)-1-butanone		1000µg/mL	acetonitrile	1mL
2743.12-K-IP	<i>N</i> -Nitroso-di- <i>n</i> -hexylamine		1000µg/mL	isopropanol	1mL
9688.8-K-AN	<i>N</i> -Nitroso- <i>N</i> -ethylaniline		1000µg/mL	acetonitrile	1mL
8926.2-500-ME	<i>N</i> -Nitroso- <i>N</i> -methylurea	NMU	500µg/mL	methanol	1mL
8986.4-K-AN	<i>N</i> -Nitrosopiperazine		1000µg/mL	acetonitrile	1mL
9018.7-K-AN	<i>N</i> -Nitrosomethylphenylamine		1000µg/mL	acetonitrile	1mL
9019.4-K-AN	1,4-Dinitrosopiperazine		1000µg/mL	acetonitrile	1mL
9326.4-K-AN	<i>N</i> -Nitrosomorpholine		1000µg/mL	acetonitrile	1mL
9328.12-K-AN	<i>N</i> -Nitrosodiphenylamine	Ndiphen	1000µg/mL	acetonitrile	1mL
9666.4-K-AN	<i>N</i> -Nitrosodiethanolamine		1000µg/mL	acetonitrile	1mL
9666.4-100MG	<i>N</i> -Nitrosodiethanolamine		neat	neat	100mg
9329.14-K-AN	<i>N</i> -Nitrosodibenzylamine		1000µg/mL	acetonitrile	1mL
9330.8-K-AN	<i>N</i> -Nitrosodi- <i>iso</i> -butylamine		1000µg/mL	acetonitrile	1mL
9330.8-100MG	<i>N</i> -Nitrosodi- <i>iso</i> -butylamine		neat	neat	100mg
9331.16-K-AN	<i>N</i> -Nitrosodi- <i>n</i> -octylamine		1000µg/mL	acetonitrile	1mL
9331.16-100MG	<i>N</i> -Nitrosodi- <i>n</i> -octylamine		neat	neat	100mg
9332.16-K-AN	<i>N</i> -Nitrosodiiisooctylamine (Di-(2-ethylhexyl)amine)		1000µg/mL	acetonitrile	1mL
9332.16-100MG	<i>N</i> -Nitrosodiiisooctylamine (Di-(2-ethylhexyl)amine)		neat	neat	100mg
9861.2-100MG	<i>N</i> -Methyl- <i>N</i> -nitro- <i>N</i> -nitrosoguanidine (wetted with ca. 50% water)	MNNG	neat	neat	100mg
9927.18-K-AN	<i>N</i> -Nitroso- <i>N,N</i> -di(3,5,5-trimethylhexyl)amine		1000µg/mL	acetonitrile	1mL
9927.18-10MG	<i>N</i> -Nitroso- <i>N,N</i> -di(3,5,5-trimethylhexyl)amine		neat	neat	10mg
9327.4-100-AN	4-Nitrosomorpholine-d8		100µg/mL	acetonitrile	1mL
9022.4-100-AN	1,4-Dinitrosopiperazine-d8		100µg/mL	acetonitrile	1mL
1707.10-K-AN	4-(<i>N</i> -Methyl- <i>N</i> -nitrosamino)-1-(3-pyridyl)-1-butanone-d4		1000µg/mL	acetonitrile	1mL
9915.4-100-AN	<i>N</i> -Nitrosopiperazine-d4		100µg/mL	acetonitrile	1mL
10037.4-100MG	4-Nitrosopiperazin-2-one		neat	neat	100mg

Nicotine nitrosamines including internal standards

Chiron No.	Name	Conc.	Solvent	QTY
1702.9-K-AN	<i>N</i> -Nitrososnicotine	1000µg/mL	acetonitrile	1mL
1706.9-K-AN	<i>DL</i> - <i>N</i> -Nitrososnicotine-d4	1000µg/mL	acetonitrile	1mL
1706.9-K-2AN	<i>DL</i> - <i>N</i> -Nitrososnicotine-d4	1000µg/mL	acetonitrile	2mL
1705.10-K-AN	(<i>RS</i>)- <i>N</i> -Nitrosoanatabine	1000µg/mL	acetonitrile	1mL
1704.10-K-AN	(<i>RS</i>)- <i>N</i> -Nitrosoanabasine	1000µg/mL	acetonitrile	1mL

