



## Nitrosamine Standards

Nitrosamines are products that are formed by the chemical reaction of amines and nitrogen containing agents such as nitrates, nitrogen oxides or nitrous acids. The products can be detected in air, water, soil, beverages, milk, cosmetics and in the alimentary tract of both humans and animals. Nitrosamines are now classified as known carcinogens and much attention in particular is being paid to the presence of a substance called N-Nitrosodi-Methylamine (NDMA) and several other nitrosamines in drinking water. This substance is accidentally produced during a process called chloramination which is used in water treatment plants to reduce or eliminate trihalomethane levels in drinking water.

The occurrence of several nitrosamines including NDMA has been documented in recycled water, effluent, industrial waste water discharges and sewage sludge. All of these are sources of groundwater contamination and all have the potential to move from groundwater into the potable water system. NDMA is now considered a priority pollutant and a number of local, national and international authorities have set regulatory guidelines for this and other nitrosamines in drinking water. Apart from NDMA, N-Nitrosomethylethylamine (NMEA), N-Nitrosodiethylamine (NDEA), N-Nitrosopyrrolidine (NPYR), N-Nitrosodi-N-Propylamine (NDPA), N-Nitrosopiperidine (NPIP) and N-Nitrosodi-N-Buthylamine (NDBA) are all considered significant.

Since nitrosamines may only be present in various matrices in ppb of ppt levels a high degree of sensitivity in sample management is necessary to monitor their presence. High quality, pure and well characterised standards are an imperative for successful qualitative and quantitative detection and measurement. Reagecon offers neat, single and multi component Standards for Nitrosamine analysis. These Standards are characterised and screened for identity, purity, stability and homogeneity. The products are prepared and certified gravimetrically and verified using GC-MS.

As for all of Reagecon's Standards and Certified Reference Materials (CRM's), the company can produce customised Standards and Private Label options in our Global Metrology Centre in Shannon.

| Product No. | Analyte                   | Concentration & Matrix             | Pack Size |
|-------------|---------------------------|------------------------------------|-----------|
| RENIT001    | N-Nitrosodiethylamine     | 1000µg/ml in Purge & Trap Methanol | 1ml       |
| RENIT002    | N-Nitrosodiethylamine     | 2000µg/ml in Purge & Trap Methanol | 1ml       |
| RENIT003    | N-Nitrosodimethylamine    | 1000µg/ml in Purge & Trap Methanol | 1ml       |
| RENIT004    | N-Nitrosodimethylamine    | 2000µg/ml in Purge & Trap Methanol | 1ml       |
| RENIT005    | N-Nitrosodi-n-propylamine | 1000µg/ml in Methylene Chloride    | 1ml       |
| RENIT006    | N-Nitrosodi-n-propylamine | 2000µg/ml in Methylene Chloride    | 1ml       |
| RENIT007    | N-Nitrosodiphenylamine    | 1000µg/ml in Methylene Chloride    | 1ml       |
| RENIT008    | N-Nitrosodiphenylamine    | 2000µg/ml in Methylene Chloride    | 1ml       |
| RENIT009    | N-Nitrosomethylethylamine | 1000µg/ml in Purge & Trap Methanol | 1ml       |
| RENIT010    | N-Nitrosomethylethylamine | 2000µg/ml in Purge & Trap Methanol | 1ml       |
| RENIT011    | N-Nitrosomorpholine       | 1000µg/ml in Purge & Trap Methanol | 1ml       |
| RENIT012    | N-Nitrosomorpholine       | 2000µg/ml in Purge & Trap Methanol | 1ml       |
| RENIT013    | N-Nitrosopiperidine       | 1000µg/ml in Purge & Trap Methanol | 1ml       |
| RENIT014    | N-Nitrosopiperidine       | 2000µg/ml in Purge & Trap Methanol | 1ml       |
| RENIT015    | N-Nitrosopyrrolidine      | 1000µg/ml in Purge & Trap Methanol | 1ml       |
| RENIT016    | N-Nitrosopyrrolidine      | 2000µg/ml in Purge & Trap Methanol | 1ml       |