AWQC

N-NITROSODIMETHYLAMINE (NDMA) IN WATER

The Australian Water Quality Centre (AWQC) is dedicated to ensuring and responding to the public health requirements relating to the provision of water and wastewater services for communities in Australia and across the world.

N-nitrosodimethylamine

N-nitrosodimethylamine (NDMA) can be found in source water at low levels as an industrial pollutant; however, the main concern in the water industry is its production during the process of disinfection of water and wastewater, or leaching from rubber products used in the treatment plant or distribution system. It is classified as a probable human carcinogen by the International Agency for Research on Cancer (IARC, 1978). Now testing and analysing for NDMA specifically and other nitrosamine compounds is possible using the latest in analytical instrumentation and expertise.

The Method

A very sensitive analytical method has been developed at the AWQC to detect NDMA at low part per trillion levels using methylene chloride for solid phase extraction (SPE). The extracts are then analysed using gas chromatography and triple quadrupole mass spectrometry (GC-QQQ).

Specialist water services

Ensuring public health

NATA WORLD RECOGNISED ACCREDITATION

bsi. ISO 9001:2015 Quality Management

The method was developed with regard to recovery, precision, accuracy, analyte stability, selectivity and sensitivity. Using 500mL of water, the limit of reporting for NDMA is 2ng/L respectively.

Application

NDMA and other nitrosamines can be measured in drinking water and recycled water by the sensitive method used at AWQC. The interim Australian Drinking Water Guideline for NDMA is 100 ng/L, and the Australian Guidelines for Water Recycling (Phase 2) has a guideline value of 10 ng/L for recycled water destined for the direct or indirect augmentation of drinking water sources. Water authorities around Australia can confirm their adherence to the guideline values by developing a monitoring program for NDMA.

Analysis for:

NDMA

Limit of Reporting:

2 ng/L

Sampling Requirements:

- 1.25L light proof bottle
- No air gap essential
- Add 150mg sodium sulphite per Litre for chloramines concentration less than 4.0mg/L.
- For each additional mg/L of chloramine add 40 mg sodium sulphite per Litre of sample.

Call us on 1300 653 366
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