



Ammonia Measurement

MicroMac C and MicroMac 1000

METHOD DATASHEET

ANALYSER

MicroMac C
MicroMac 1000

METHODS

Colorimetric – Nitroprusside
Fluorimetric

APPLICATIONS

Potable Water
Sewage Treatment
Industrial Effluent
Surface Water
Seawater

RANGES

0-100 ppb to 0-40 ppm as N

ANALYSER KEY FEATURES

Robust Loop Flow Analysis system
Low reagent consumption
Easy to operate
Multi-chemistry options available

Ammonia is a gas which occurs in the environment as part of the nature use of nitrogen by all forms of life. Ammonia is very soluble in water and it is as a gas dissolved in water that it has its greatest environmental impact.

An essential stage in sewage and industrial effluent treatment is the reduction of ammonia levels such that fish in the receiving waters are not harmed. Measurement of nutrients in the effluent of wastewater treatment is a requirement of the Urban Waste Water Treatment Directive and a variety of other directives relating to water quality. In potable water treatment ammonia can interfere with the chlorination process and measurement at the intake stage and within the process is important to both ensure full treatment and reduce costs. In surface water the presence of ammonia is an indicator of pollution and is important as part of the on-going requirements of the Water Framework directive.

The MicroMac C and MicroMac 1000 analysers are both capable of monitoring Ammonia, usually expressing the result in ppb or ppm as N. The methods used by the analysers are directly comparable to laboratory techniques as defined in standard methods books.

The use of colorimetric or fluorimetric methods allows far greater sensitivity than it possible using ISE based systems and does not suffer from interferences such as Potassium. Partech's full installation, commissioning and maintenance program ensures peace of mind when considering installing an ammonia monitoring system.



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Ammonia Measurement

MicroMac C and MicroMac 1000

METHOD DATASHEET

Method 1

Description

Ranges

Typical Applications

Reagents P/N: 181470
P/N: 181480

System Method No

Method 2

Description

Range

Typical Applications

Reagents P/N: 223007

System Method Number

Reference

Nitroprusside

In this automated method the ammonia ions present in the sample react with phenol and potassium tartrate in an alkaline medium in the presence of nitroprusside as a catalyst. The indophenol derivative that is formed produces a blue / green colour the intensity of which is proportional to the concentration of the ammonia and is measured at 660 nm.

0 – 10 / 20 / 40 ppm as N

Waste Water, Potable and Surface Water, not suitable for Seawater

Ammonia, Reagent 1, Colour, Alk Phenate for MicroMac (1 Litre)
Ammonia, Reagent 2, DCIC for MicroMac (1 Litre)

LFA-NH3-02

Fluorimetric

In this automated method, the ammonia ions present in the sample, react with a buffered solution of orthophthalaldehyde (OPA). After heating at 40°C, the reaction products pass through a fluorimetric flowcell, having an excitation wavelength of 374/390nm and is then measured at 420nm.

0 – 100 to 0 – 1000 ppb as N

Low Level waste Water, Potable, Surface Water and Seawater

Ammonia, Reagent, Fluorimetric Method for MicroMac (1 Litre)

Joint System/Fluorimetric Method

Methods for the Examination of Waters and Associated Materials:
Ammonia in Waters. 1981; ISBN No: 0117516139

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The company reserves the right to alter the specification without prior notice. E&OE

Call us on 01726 879800 www.partech.co.uk



Charlestown St Austell Cornwall UK PL25 3NN T:+44(0)1726 879800 F:+(0)1726 879800 E:info@partech.co.uk www.partech.co.uk