NANOCOLOR® Anionic surfactants 4

REF: 985032 en

Overview

The test is suitable for the photometric determination of MBAS/ SDS.

This test is suitable for surface water, groundwater and drinking water, as well as for wastewater, process water and production water.

- Measuring range:

0.20–4.00 mg/L MBAS (method 0321)

0.20–3.50 mg/L SDS (method 0322)

- Number of tests: 20
- Wavelength for photometric determination: 620 nm
- Shelf life: 24 months
- Reaction time: 10
- Storage temperature: 15–25 °C
- Storage conditions: upright

Method

Photometric determination with methylene blue, analogous to DIN 38 409-H23-1 and APHA 5540C.

Interferences

The foreign materials shown here do not interfere with the test up to the indicated concentrations (in mg/L). The cumulative effect of different interfering ions has not been tested.

Data in mg/L:

- Fe^{3+}: < 20
- Cr^{3+}, Cr^{6+}: < 50
- Al^{3+}, NO_3^{2-}: < 100
- Ca^{2+}, Mg^{2+}, Ni^{2+}, NO_2^{-}: < 200
- NH_4^{+}, Cu^{2+}, Zn^{2+}, Cl^{-}: < 500
- PO_4^{3-}, SO_4^{2-}, K^{+}, Na^{+}: < 1000

Cationic surfactants can produce results below actual values.

The method is suitable for the analysis of seawater after 1+19 dilution.

Reagents and accessories

Contents of reagents set:

- 20 test tubes R0
- 1 reagent R2

Required devices:

- MACHEREY-NAGEL photometer
- Digital piston pipette 1–5 mL (REF 916909) with pipette tips (REF 916916)
- Digital piston pipette 200–1000 µL (REF 91671) with pipette tips (REF 91667)

Sampling and preparation

See DIN EN ISO 5667-3-A 21.

Adjust to pH 4–9 prior to analysis.

Quality control

The measurement of a blank value and a standard is recommended before every measuring series as quality control measure.

Quality data:

The following data were determined during production according to ISO 8466-1 and DIN 38402-A51:

- Number of LOTs: 13
- Standard deviation of the method: ± 0.05 mg/L MBAS
- Coefficient of variation of the process: ± 2.26 %
- Confidence interval: ± 0.13 mg/L MBAS

Specified data for procedure:

- Sensitivity (absorbance of 0.010 A corresponds to): 0.06 mg/L MBAS
- Accuracy of a measurement value: ± 0.30 mg/L MBAS

LOT-specific certificates are available at *www.mn-net.com*.

Procedure

1. Open test tube
2. Pipette 4 mL of sample into test tube
3. Add 0.5 mL R2
4. Seal test tube and shake vigorously
5. Wait 10 min
6. Clean outside of test tube
7. Measure

Notes

The calibration curve is based on dodecylbenzene sulfonic acid methyl ester (MBAS, method 0321) / sodium dodecyl sulfate (SDS, method 0322). If determining other anionic surfactants, you must first measure a standard solution to check the calibration curve.

Correction value e. g. for colored or turbid samples possible (see photometer manual).

When using other photometers, make sure measurements are possible in test tubes (16 mm OD) and calibrate the method.

Information regarding safety can be found on the box' label and in the safety data sheet. You can download the SDS from *www.mn-net.com/SDS*.

www.mn-net.com

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