NANOCOLOR® Chloride 200 REF: 985019

Overview

The test is suitable for the photometric determination of the chloride content. The principle of the reaction is in accordance with DIN EN ISO 15682-D31.

The test is suitable for surface water, ground and drinking water.

- Measuring range:
- 5–200 mg/L Cl^- (method 0191)
- 0.10–1.00 g/L Cl^- (method 0192)
- Number of tests: 20
- Wavelength for photometric determination: 470 nm
- Shelf life: 12 months
- Reaction time: 3 minutes
- Storage temperature: 15–25 °C
- Storage conditions: upright

Method

Chloride reacts with mercury(II) thiocyanate to undissociated mercury(II) chloride. The free thiocyanate forms a blood-red complex with iron(III) ions. The colour is evaluated photometrically.

Interferences

The following contaminants do not interfere with the test up to the indicated concentrations. The cumulative effect of different interfering ions has not been tested.

Data in mg/L:

- Br^-, I^-, SCN^-, $S_2O_3^{2-}$, S^{2-}: 0
- F^-: 20

Turbidities cause higher measurement values.

The method is suitable for the analysis of seawater after 1+199 dilution.

Reagents and accessories

Contents of reagents set:

- 20 test tubes R0
- 2 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)

Standards

- *NANOCONTROL* Multistandard Metals 1 (REF 925015)

Sampling and preparation

See DIN EN ISO 5667-3-A 21.

Adjust to pH 1–13 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: 7
- Standard deviation of the method: ± 5 mg/L Cl^-
- Coefficient of variation of the process: ± 5 %
- Confidence interval: ± 15 mg/L Cl^-

Specified data for procedure:

- Sensitivity (absorbance of 0.010 A corresponds to): ± 1 mg/L Cl^-
- Accuracy of a measurement value: ± 2 mg/L Cl^-

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

Procedure

5–200 mg/L Cl^- (method 0191)

1. Open test tube. Pipette 1 mL of sample into test tube
2. Add 1 mL R2
3. Mix
4. Wait 3 min
5. Clean outside of test tube
6. Measure

0.10–1.00 g/L Cl^- (method 0192)

1. Open test tube. Pipette 0.2 mL of sample into test tube
2. Add 1 mL R2
3. Mix
4. Wait 3 min
5. Clean outside of test tube
6. Measure

Notes

Test a sample of distilled water (REF 918932) to generate a blank value for the reagent.

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

When using a standard, the measured value is constant over a period of min. 30 min.

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*.

10/2021

CTL SCIENTIFIC SUPPLY CORP. 1016-3 Grand Boulevard, Deer Park, NY 11729
Tel: **631-242-4249**
Web: **www.ctlscientific.com**

Manufacturer: **Macherey-Nagel GMbH & CO. KG** Rev: 2025-03