

REF 91834

en

Test 1-34

04.19

**NANOCOLOR® Cationic Detergents**

(cationic surfactants)

**Extraction method****Method:**

Photometric determination with bromophenol blue

Cuvette rectangular:	<b>50 mm</b>	<b>10 mm</b>
Range (mg/L CTAB):	<b>0.05–3.00</b>	<b>0.2–5.0</b>
Factor:	<b>01.51</b>	<b>007.4</b>
Wavelength (HW = 5–12 nm):	<b>436 nm</b>	
Factor:	<b>01.79</b>	<b>008.8</b>
Wavelength (HW = 5–12 nm):	<b>445 nm</b>	
Reaction time:	<b>0</b>	
Reaction temperature:	<b>20–25° C</b>	

**Contents of reagent set:**

200 mL Cationic Detergents R1	3 x 535 mL Cationic Detergents R3 (organic phase)
10 g Cationic Detergents R2	2 g wadding
1 measuring spoon 85 mm	1 glass funnel 35 m Ø

**Hazard warning:**

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](http://www.mn-net.com/SDS).

**Interferences:**

If the water contains anionic detergents in addition to the cationic ones, equivalent quantities are combined which escape analysis. In order to achieve optimum test results, it is essential that all glassware be thoroughly cleaned before use. The most suitable solvent is alcohol (ethanol).

The method can not be applied for the analysis of sea water.

**Procedure:**

Requisite accessories: 2 separations funnels 100 mL (REF 916 64), piston pipette with tips  
Pour into two separate separations funnels:

Test sample	Blank value
<b>50 mL</b> test sample (the pH value of the sample must be between pH 4 and 7)	<b>50 mL</b> distilled water
<b>2 mL</b> R1, mix	<b>2 mL</b> R1, mix
<b>1 spoon</b> R2, dissolve	<b>1 spoon</b> R2, dissolve
<b>20 mL</b> R3	<b>20 mL</b> R3
shake for <b>3 min</b> , allow to separate	shake for <b>3 min</b> , allow to separate

After phase separation filter each of the lower layers through the funnels with wadding into cuvettes and measure. *Too much wadding produces inaccurate test results.*

**Measurement:**

For NANOCOLOR® photometers see manual, test 1-34.

**Photometers of other manufacturers:**

For other photometers verify factor for each type of instrument by measuring standard solutions. The factor depends extremely from wavelength.

**Interpretation:**

Cationic detergents refer to *N*-cetyl-*N,N,N*-trimethylammoniumbromide (CTAB). To analyse cationic detergents of known composition, the following correction is necessary:

$$\text{Test result} = \text{Measured value} \times \text{EW/CTAB}$$

$$\text{EW} = \text{equivalent weight of substance to be determined}$$

$$\text{CTAB} = \text{equivalent weight of CTAB} (= 365)$$

**Disposal:**

Information regarding disposal can be found in the safety data sheet. You can download the SDS from [www.mn-net.com/SDS](http://www.mn-net.com/SDS).