

REF 91832

Test 1-32

04.23

NANOCOLOR® Anionic Detergents

(anionic surfactants)

Extraction method**Method:**

Photometric determination with methylene blue

Cuvette rectangular:	50 mm	10 mm
Range (mg/L MBAS):	0.02 – 1.00	0.1 – 5.0
Wavelength (HW = 5 – 12 nm):	620 nm	
Range (mg/L MBAS):	0.01 – 0.50	0.1 – 2.0
Wavelength (HW = 5 – 12 nm):	650 nm	
Reaction temperature	20 – 25 °C	

Contents of reagent set:

160 mL Anionic Detergents R1 3 x 535 mL Anionic Detergents R4 (organic phase)
 80 mL Anionic Detergents R2 2 g wadding
 80 mL Anionic Detergents R3 1 glass funnel 35 mm 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.

Interferences:

If the water contains cationic detergents in addition to the anionic ones, equivalent quantities are combined which escape analysis. Sulfide ions must be removed by the addition of hydrogen peroxide. In order to achieve optimum test results, it is essential that all glassware be thoroughly cleaned before use. Washing with 10 % alcoholic hydrochloric acid followed by chloroform is most suitable for this purpose.

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

Procedure (1st extraction):

Requisite accessories: 2 x 2 separations funnels 100 mL (REF 91664), piston pipette with tips

Pour into two separate separation funnels:

Test sample	Blank value
50 mL test sample (the pH value of the sample must be between pH 4 and 13)	50 mL distilled water
2 mL R1, mix	2 mL R1, mix
1 mL R2, mix	1 mL R2, mix
20 mL R4	20 mL R4
shake for 1 min , allow to separate	shake for 1 min , allow to separate

Shake evenly. Vigorous shaking will cause an emulsion to be formed, consequently resulting in errors.

Procedure (2nd extraction):

Pour into two other separate separation funnels:

Test sample	Blank value
50 mL distilled water	50 mL distilled water
1 mL R3, mix	1 mL R3, mix
add lower organic phase from the 1st separation funnel	add lower organic phase from the 1st separation funnel
shake for 1 min	shake for 1 min

After phase separation filter each of the lower layers through funnels with wadding into cuvettes and measure.

Too much wadding produces inaccurate test results.

Measurement:

For NANOCOLOR® photometers see manual, test 1-32.

Photometers of other manufacturers:

For other photometers verify factor for each type of instrument by measuring standard solutions.

Interpretation:

Anionic detergents refer to dodecylbenzenesulphonic acid methyl ester. To analyze anionic detergents of known composition, the following correction is necessary:

Test result = Measured value x EW/MBAS

EW = equivalent weight of substance to be determined

MBAS = equivalent weight of MBAS (= 342)

Disposal:

Information regarding disposal can be found in the safety data sheet. You can download the SDS from www.mn-net.com/SDS.

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