



Surfactants M. (anion.) TT

M376

0.05 - 2 mg/L SDSA

Methylene Blue

Instrument specific information

The test can be performed on the following devices. In addition, the required cuvette and the absorption range of the photometer are indicated.

| Instrument Type | Cuvette | λ | Measuring Range |
|--|---------|-----------|--------------------|
| MD 600, MD 610, MD 640, MultiDirect, SpectroDirect, XD 7000, XD 7500 | ø 16 mm | 660 nm | 0.05 - 2 mg/L SDSA |

Material

Required material (partly optional):

| Reagents | Packaging Unit | Part Number |
|--|----------------|-------------|
| Surfactants (anionic) Spectroquant 1.02552.0001 tube test ⁴⁾ | 25 pc. | 420763 |

Application List

- Waste Water Treatment

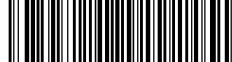
Preparation

1. Because the reaction depends on temperature, the temperature must be maintained at 10-20 °C (for the reaction vial and the water sample).
2. Invert the vial prior to the measurement. Should the lower phase be turbid, warm the cell briefly with the hand.



Notes

1. This method is adapted from MERCK.
2. Spectroquant® is a registered trademark of the company MERCK KGaA.
3. Appropriate safety precautions and good laboratory technique should be used during the whole procedure.
4. Before performing the test, you must read through the original instructions and safety advice that is delivered with the test kit (MSDS are available on the homepage of www.merckmillipore.com).
5. Sample volume should always be metered by using a 5ml volumetric pipette (class A).
6. The reagents are to be stored in closed containers at a temperature of +15 °C – +25 °C.
7. MBAS = **M**ethylene**b**lue**a**ctive **S**ubstances, calculated as sodium 1-dodecanesulfonate

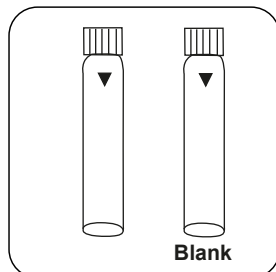


Determination of Anionic surfactants with MERCK Spectroquant® Cell Test, No. 1.14697.0001

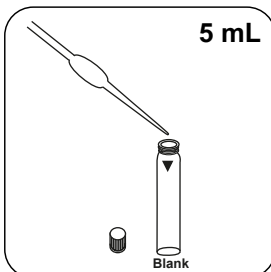
Select the method on the device.

For this method, a ZERO measurement does not have to be carried out every time on the following devices: XD 7000, XD 7500

Skip steps with Blank.



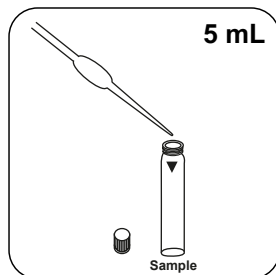
Prepare two reaction vials.
Mark one as a blank.



Put 5 mL deionised water
in the blank.



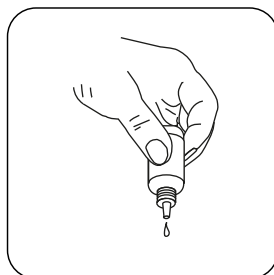
Do not mix the contents



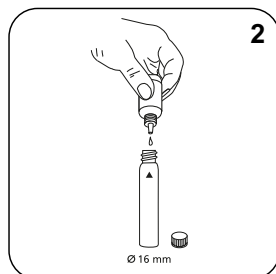
Put 5 mL sample in the
sample vial.



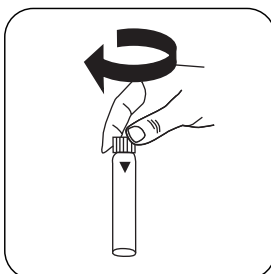
Do not mix the contents



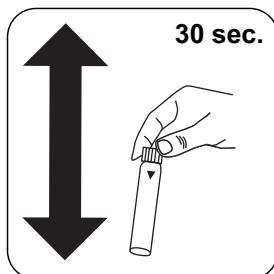
Hold cuvettes vertically and
add equal drops by pressing
slowly.



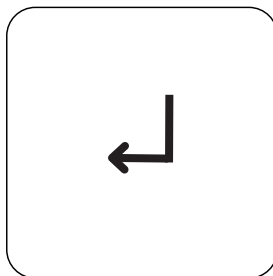
Add 2 drops Reagenz
T-1 K solution to each
vial.



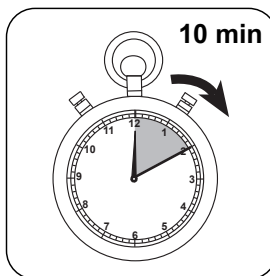
Close vial(s).



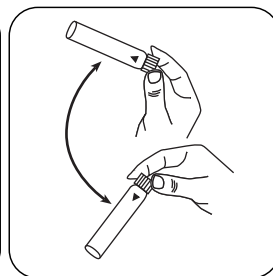
Mix the contents by shaking.
(30 sec.).



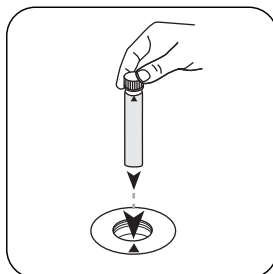
Press the **ENTER** button.



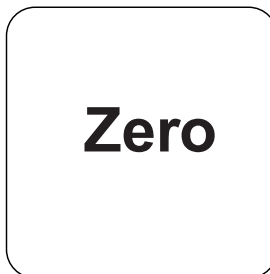
Wait for **10 minute(s)** reaction time.



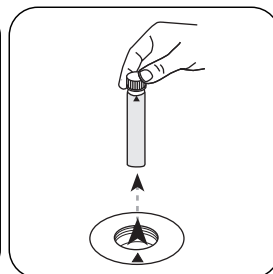
Invert **zero cuvette**.



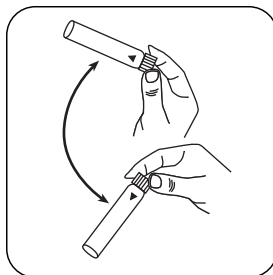
Place **blank** in the sample chamber. • Pay attention to the positioning.



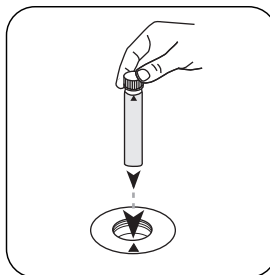
Press the **ZERO** button.



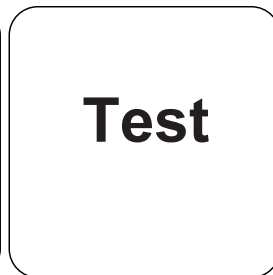
Remove **vial** from the sample chamber.



Invert the **sample vial** .



Place **sample vial** in the sample chamber. • Pay attention to the positioning.



Press the **TEST** (XD: **START**) button.

The result in mg/L MBAS appears on the display.



Analyses

The following table identifies the output values can be converted into other citation forms.

| Unit | Cite form | Scale Factor |
|------|-----------|--------------|
| mg/l | SDBS | 1.28 |
| mg/l | SDS | 1.06 |
| mg/l | SDOSSA | 1.63 |

Chemical Method

Methylene Blue

Appendix

Calibration function for 3rd-party photometers

$$\text{Conc.} = a + b \cdot \text{Abs} + c \cdot \text{Abs}^2 + d \cdot \text{Abs}^3 + e \cdot \text{Abs}^4 + f \cdot \text{Abs}^5$$

| | ∅ 16 mm |
|---|-------------------------|
| a | $1.36547 \cdot 10^{-2}$ |
| b | $1.8329 \cdot 10^{+0}$ |
| c | |
| d | |
| e | |
| f | |

According to

DIN EN 903:1994

⁴⁾ Spectroquant® is a Merck KGaA Trademark