

## Surfactants M. (not ionic) TT

M377

0.1 - 7.5 mg/L Triton X-100

TBPE

### 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	$\lambda$	Measuring Range
MD 600, MD 610, MD 640, MultiDirect, SpectroDirect, XD 7000, XD 7500	ø 16 mm	610 nm	0.1 - 7.5 mg/L Triton X-100

### Material

Required material (partly optional):

Reagents	Packaging Unit	Part Number
Surfactants (non ionic) Spectroquant 1.01787.0001 tube test <sup>4)</sup>	25 pc.	420764

### Application List

- Waste Water Treatment
- Galvanization

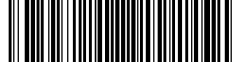
### Preparation

1. Before performing the test read the original test instructions (delivered with the test) and the MSDS (available at [www.merckmillipore.com](http://www.merckmillipore.com)).
2. Appropriate safety precautions and good lab technique should be used during the whole procedure.
3. Because reaction depends on temperature, sample and tube temperature must be between 20 and 25 °C.
4. The test sample should have a pH value between 3 and 9.

### Notes

1. This method is adapted from MERCK.
2. Spektroquant® is a registered trade mark of the company MERCK KGaA.
3. Sample volume should always be metered by using volumetric pipette (class A).
4. Triton® is a registered trade mark of the company DOW Chemical Company.



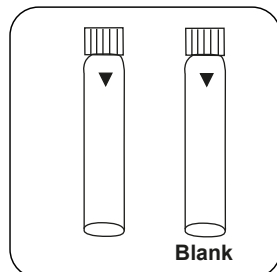


## Determination of Non-ionic surfactants with MERCK Spectroquant® Cell Test, No. 1.01787.0001

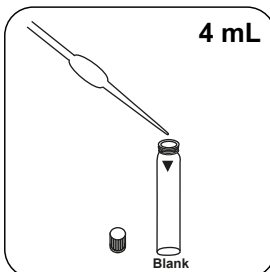
Select the method on the device.

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

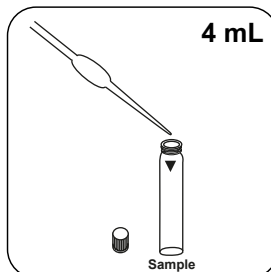
Skip steps with Blank.



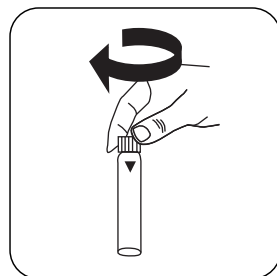
Prepare two **reaction vials**.  
Mark one as a blank.



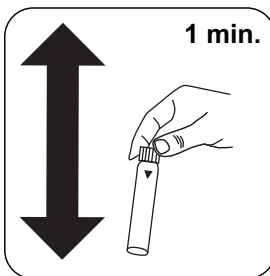
Put **4 mL deionised water**  
in the blank.



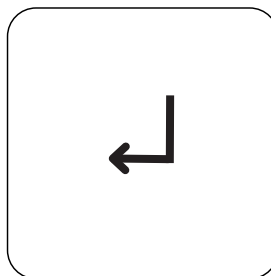
Put **4 mL sample** in the  
sample vial.



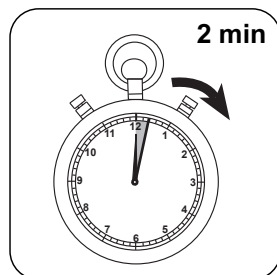
Close vial(s).



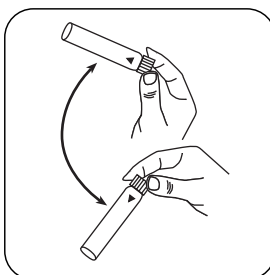
Mix the contents by shaking  
vigorously. (1 min.).



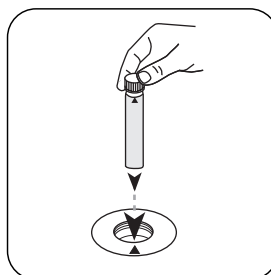
Press the **ENTER** button.



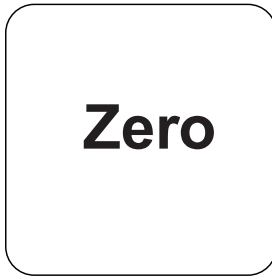
Wait for **2 minute(s) reaction**  
**time**.



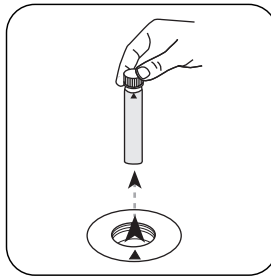
Invert **zero cuvette**.



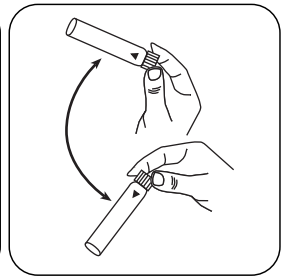
Place **blank** in the sample  
chamber. • Pay attention to  
the positioning.



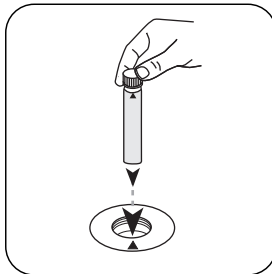
Press the **ZERO** button.



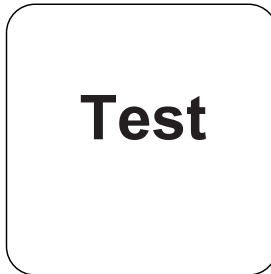
Remove **vial** from the sample chamber.



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 Triton X-100 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	NP10	1.1

## Chemical Method

TBPE

## Appendix

### Calibration function for 3rd-party photometers

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

	ø 16 mm
a	$5.64524 \cdot 10^{-2}$
b	$5.9893 \cdot 10^{+0}$
c	
d	
e	
f	

### According to

DIN EN 903:1994

<sup>o)</sup> Spectroquant<sup>®</sup> is a Merck KGaA Trademark