

0.1–4.0 mg/L MBAS (as SDBS (Sodium dodecylbenzene sulfonate))

TNTplus 874

Scope and application: Analysis of surface water, wastewater and process analysis.



Test preparation

Reagent storage

Storage temperature: 15–25 °C (59–77 °F)

pH/Temperature

The pH of the water sample must be between pH 4–9.

The temperature of the water sample and reagents must be between 15–25 °C (59–77 °F).

Before starting

If streaks or small drops of water forms in the lower part of the vial, tilt the vial 90 degrees and rotate it at the same time to remove the streaks or drops.

Note:

If the ambient temperature decreases, light turbidity can form in the chloroform phase. Increase the vial temperature briefly (for example, hold the vial in hands) to remove turbidity.

Make sure to work at the recommended temperature to get correct results.

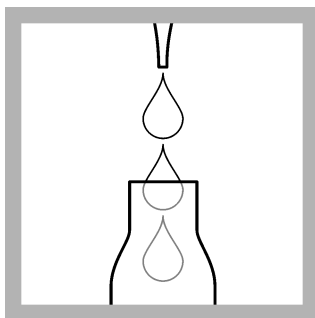
Make sure to perform **procedure step 3** (shaking) always the same way and with same intensity using **both** hands. For example: for preparation of a new user LAS standard calibration curve, shake **all vials together** at the **same time** to get better results.

Review safety information and expiration date on the package.

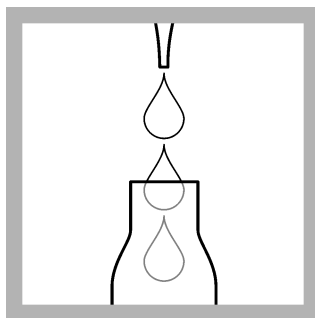
Review the Safety Data Sheets (MSDS/SDS) for the chemicals that are used. Use the recommended personal protective equipment.

Dispose of reacted solutions according to local, state and federal regulations. Refer to the Safety Data Sheets for disposal information for unused reagents. Refer to the environmental, health and safety staff for your facility and/or local regulatory agencies for further disposal information.

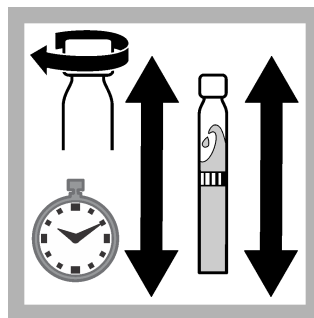
Procedure



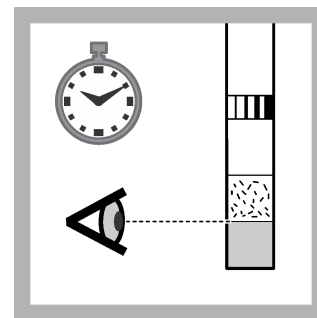
1. Carefully pipet 2.0 mL of **sample**.



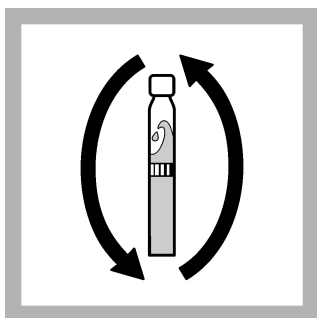
2. Carefully pipet 0.2 mL of **solution A**.



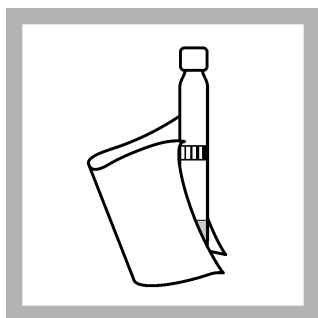
3. Close the vial. Hold the vial between the screw cap and the base, shake it for **60 seconds**.



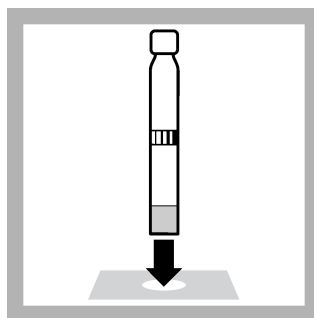
4. Then leave the vial standing upright for **30 seconds** to allow phase separation to occur.



5. Carefully invert the vial twice.



6. Thoroughly clean the outside of the vial and evaluate.



7. Insert the vial into the cell holder.
DR1900: Go to LCK/TNTplus methods.
Select the test, push **READ**.

Interferences

The ions listed in the table have been individually checked against the given concentrations and do not cause interference. The cumulative effects and the influence of other ions have not been determined.

Cationic surfactants cause low-bias results.

The measurement results must be subjected to plausibility checks (dilute and/or spike the sample).

Interference level	Interfering substance
1000 mg/L	K^+ , Na^+ , SO_4^{2-}
500 mg/L	Cl^-
250 mg/L	NH_4^+ , PO_4^{3-}
100 mg/L	Mg^{2+} , NO_2^- , Ca^{2+} , NO_3^- , Cu^{2+}
50 mg/L	H_2O_2 , $S_2O_8^{2-}$
25 mg/L	$S_2O_3^{2-}$, Fe^{2+}
10 mg/L	Cr^{3+} , Cr^{6+} , Cl_2
5 mg/L	SO_3^{2-} , Ni^{2+} , Zn^{2+}
2 mg/L	Fe^{3+}

Summary of method

Anionic surfactants react with methylene blue to form complexes, which are extracted in chloroform and measured photometrically.

The method is calibrated using the standard substance SDBS (Sodium dodecylbenzene sulfonate). Measurements of standards prepared from **SDBS or LAS (Linear Alkylbenzene sulfonate)** is possible. The results are measured at 653 nm. The intensity of the blue color is directly proportional to the increase of surfactant concentration.

TNT^{plus}



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