LCA 333
Nonionic surfactants standard

1 g/L Triton X-100 **LCA 333**

Scope and application: Quality Assurance

Test preparation

Test storage

Storage temperature: 20 °C (68 °F)

Before starting

The exact procedure is given in the working procedure for the Cuvette Test LCK 333 (instead of a water sample, use the diluted standard solution with 2 mg/L surfactant).

Measuring the standard

Checking handling and equipment

– internal –

Recommended minimum frequency:

Every 10th sample (per person);

but at least once monthly;

in addition:

– when measurement results seem implausible

– when measurement results are of special significance (for example comparative measurement)

Special note

LCA 333 nonionic surfactants standard must be diluted in the ratio **1 : 500** before the evaluation with Cuvette Test LCK 333. A **fresh** diluted standard solution must be prepared **carefully** before each evaluation, as the solution cannot be kept.

Once a solution has been taken out of the bottle, it must **not be returned to it**.

The necessary reaction temperature is specified in the working procedure for Cuvette Test LCK 333. This temperature applies to the cuvettes as well as the standard solution. Compliance with this temperature requirement is essential.

All **glassware** must be thoroughly rinsed **several times** with distilled water before it is used, so that it is **free of any traces of surfactant**, otherwise high-bias results could be obtained due to the presence of surfactant residues.

Review safety information and expiration date on the package.

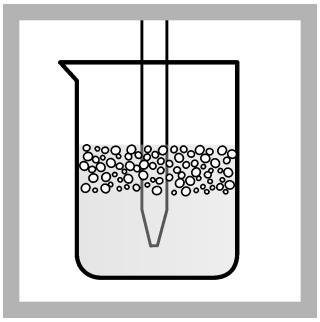
Review the Safety Data Sheets (MSDS/SDS) for the chemicals that are used. Use the recommended personal protective equipment.

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—Preparation of a standard solution with 2 mg/L surfactant



1. Dilute the LCA 333 standard solution with distilled water in the ratio **1 : 500**. The diluted standard solution has a concentration of **2 mg/L** surfactant.



2. Mix the diluted solution thoroughly and allow the foam to settle! **Do not pipette out of the foam!**

Evaluation

Evaluate the cuvette as described in the working procedure of Cuvette Test LCK 333.

Target value:	2 mg/L surfactant
Confidence interval:	± 0.3 mg/L surfactant

Interpreting your measurement results:

If your measurement result is inside the given confidence interval, your equipment and handling are in order. If the measurement result is outside the given confidence interval, the source of error must be identified.

The following checklist will help you to eliminate possible sources of error.

Source of error	Checkmark YES	Checkmark NO
Has the expiry date of the cuvette test LCK 333 and/or the standard solution LCA 333 been exceeded?		
Was the diluted LCA 333 standard solution prepared carefully as described above?		
Was the diluted LCA 333 standard solution prepared freshly?		
Was the glassware free of surfactant residues?		
Was the water you used free of surfactants?		
Was the working procedure of the actual LCK 333 test package used?		
Was a new pipette tip used?		
Was the correct volume pipetted?		
Were the contents of the cuvette thoroughly mixed for 2 minutes (with a frequency of 2–3 times per second) and not too vigorously shaken?		

Did you wait for the phases to separate completely?		
Did you clean the outside of the cuvette?		
Were the reaction time and temperature correct?		
Does the control number of your photometer correspond to the documented control number in the working procedure?		
Do your photometer settings correspond to the documented data in the working procedure?		

If the checklist fails to reveal the source of error, the instruments and equipment must be checked individually. This can best be done by replacing the component that is to be tested. Please do not hesitate to contact us if necessary.

Summary of method

LCA 333 surfactant standard is a stock solution with a concentration of 1 g/L surfactant in the form of Triton X-100. Before the evaluation, this solution has to be diluted so that its concentration is within the measuring range of the Cuvette Test LCK 333. The diluted standard solution is an aid to check handling and equipment (pipette, reagents, photometer, and so on), and must be prepared freshly before each evaluation.

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