LCA 310 Standard for Chlorine, free

DOC312.53.94082

LCA 310

Scope and application: Quality Assurance

Test preparation

Test storage

Storage temperature: 2–8 °C (35–46 °F)

Before starting

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.

Measuring the standard

Checking handling and equipment

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)

Procedure for measuring the standard

The exact procedure is given in the working procedure for Cuvette Test LCK 310.

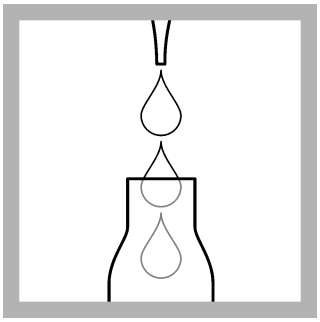
Standard concentration

Due to production-related factors, the concentration of the standard is between 25–30 mg/L.

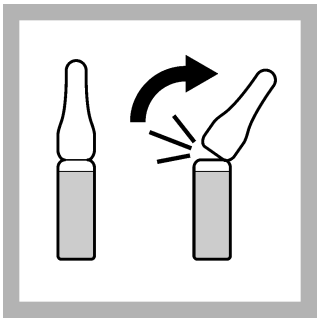
After the procedure has been carried out, the **nominal value of the LCA 310** is the **concentration of the standard * 0.026**. See attached table for help:

Standard concentration	**LCA 310**
mg/L	**mg/L**
25.00	0.650
25.50	0.663
26.00	0.676
26.50	0.689
27.00	0.702
27.50	0.715
28.00	0.728
28.50	0.741
29.00	0.754
29.50	0.767
30.00	0.780

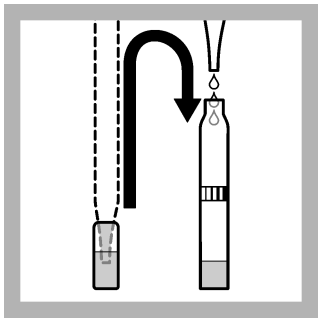
Procedure



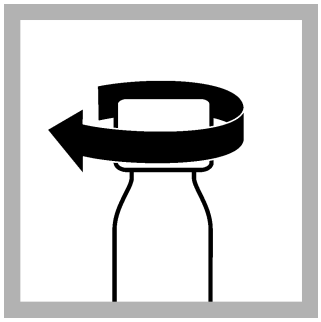
1. Pipet **7.5 mL distilled water** into a **sample cuvette (LCK 310)**.



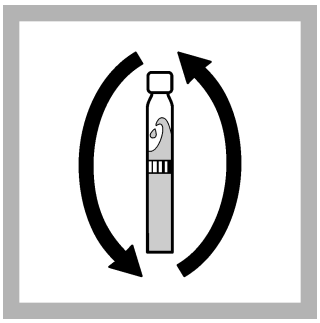
2. Place a paper towel (EZZ 073) around the neck of the ampoule and break off the tip at the prepared break point (**caution:** sharp edges at break point).



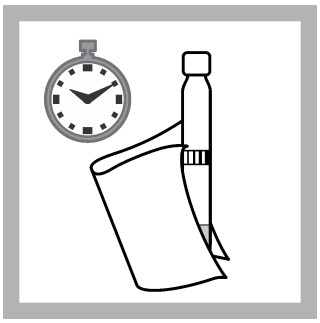
3. **Immediately** pipet into the same sample cuvette: **0.2 mL standard**.



4. Close the cuvette.



5. **Carefully** invert the cuvette a few times – **do not shake!** – and rotate it slightly to remove any bubbles sticking to the sides.



6. After **1 minute**, thoroughly clean the outside of the cuvette and evaluate.

Evaluation

Evaluate the cuvette as described in the working procedure of Cuvette Test LCK 310.

Confidence interval:	± 0.07 mg/L Chlorine

Interpreting the measurement results:

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

Use the following checklist to eliminate possible sources of error:

Source of error	Checkmark **YES**	Checkmark **NO**
Has the expiry date of the cuvette test LCK 310 and/or the standard solution LCA 310 been exceeded?		
Was the working procedure of the actual LCK 310 test package used?		
Was a new pipette tip used?		
Was the correct volume pipetted?		
Was the cuvette inverted carefully (not shaken) and was the outside cleaned thoroughly?		
Were the correct reaction time and temperature adhered to?		
Was zeroing carried out with the zero solution?		
Does the control number of the photometer correspond to the documented control number in the working procedure?		
Do the 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. Contact the manufacturer if necessary.

HACH LANGE GMBH
Willstätterstraße 11
D-40549 Düsseldorf
Tel. +49 (0) 2 11 52 88-0
Fax +49 (0) 2 11 52 88-143
info-de@hach.com
www.hach.com

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