LZC901 Dilution water set

DOC312.53.94486

BOD_5-accessories — LZC901

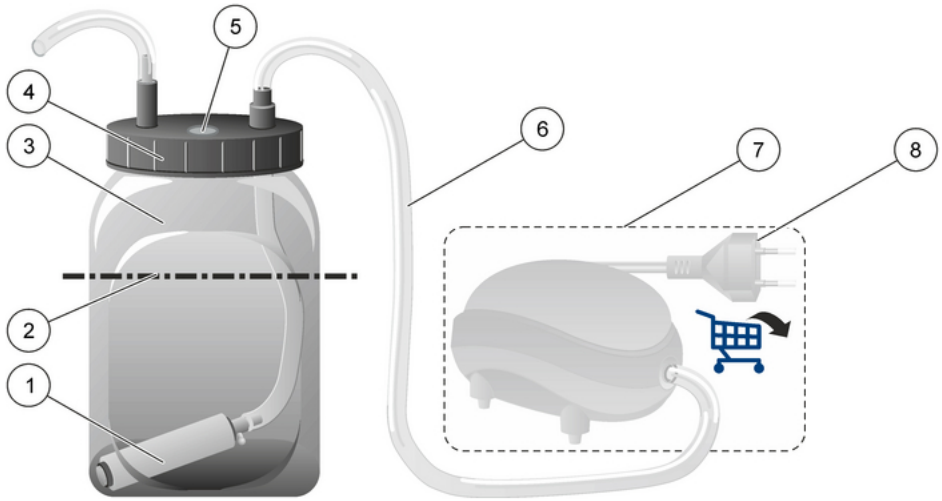
Scope and application: For Cuvette Test LCK555 BOD_5.

Test preparation

Before starting

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 Aerating brick	5 Sealing plug
2 500 mL level	6 Flexible tube
3 Container	7 Pump
4 Lid	8 Plug

Measuring station installation

1. Connect the hose connection to the pump.
2. Position the pump above the water level of the container.
3. Fill the container (refer to: Dilution water preparation on page 2).
4. Plug in the power plug.

For special attention:

The aerating brick must always be completely immersed in the dilution water, otherwise sufficient aeration cannot be guaranteed.

Dilution water preparation

1. Fill **500 mL** tap water into the container (aerate chlorinated tap water for **5 minutes** in order to expel free chlorine).
2. Pipet 0.3 mL trace element solution from LCK555 BOD_5 cuvette-test.
3. **Inoculating the dilution water with biomass**

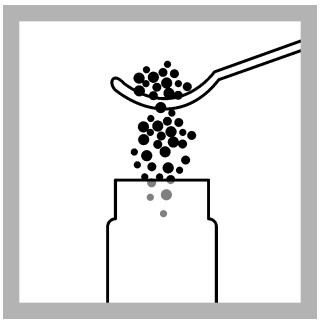
   a. **COD: 200–250 mg/L**
   Settled, particle-free, if necessary coarsely filtered, municipal wastewater from the outflow of a presedimentation tank is suitable for inoculating the dilution water with biomass. The COD of the added wastewater should be between **200** and **250 mg/L**.
   Pipette **5 mL** inoculation solution into **500 mL** prepared dilution water. The dilution water prepared in this way can be used for **8 days**.

   b. After it has been inoculated, **aerate** the dilution solution for at least **3 days**.

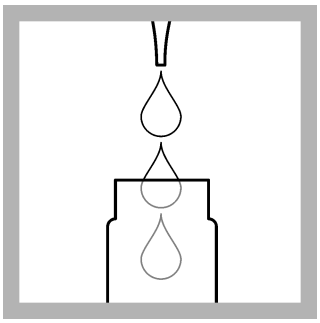
   c. **COD: 20–50 mg/L**
   Settled, particle-free outflow from a sewage treatment plant is suitable for inoculating the dilution water with biomass. The COD of the added wastewater should be **20–50 mg/L**.
   Pipette **20 mL** inoculation solution into **500 mL** prepared dilution water. The dilution water prepared in this way can be used for **8 days**.

   d. After it has been inoculated, **aerate** the dilution solution for at least **3 days**.

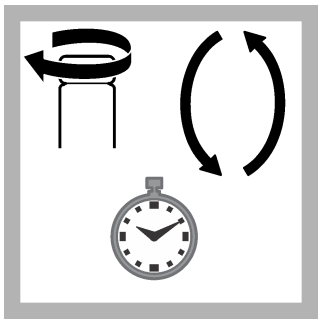
Use of LZC555 inoculation material



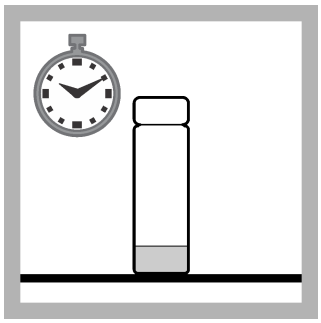
1. Add a **level dosing spoon** of **inoculation material** into a reaction tube.



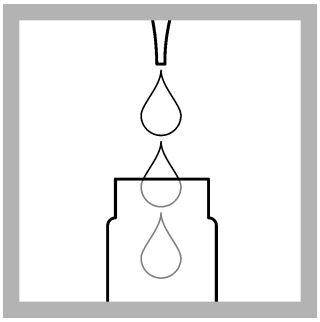
2. Pipet **10 mL buffer solution** into the reaction tube.



3. Close the reaction tube. Shake the reaction tube **thoroughly** for **1 minute** in order to resuspend the microorganisms.



4. Leave the suspension to stand for **1 hour** at room temperature (18–24 °C (64–75 °F)).



5. Add **0.5 mL** of the **inoculation solution from the supernatant dilution water** in the reaction tube (refer to: Dilution water preparation on page 2). The added inoculation solution **must not contain any particles**.

If particles adhere to the outside of the pipette tip, it is advisable to wipe them off with a disposable cloth.



6. **Aerate** the inoculated dilution water for **1 hour**.

Extraction of the dilution water

Extraction

1. Switch off the aeration **1 hour** before extracting dilution water for BOD_5 measurements.
2. Extract the **dilution water** by removing the stopper from the lid and remove dilution water with the accompanying transfer pipette.

Note

The prepared dilution water should always be clear and free of turbidities or suspended materials.

When a dilution water set LZC901 has been in use for a long time it is necessary to rinse out the flask, the aeration stone and the tube that dips into the dilution water with tap water and then to dry them to remove microbiological „lawns“.

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