

0.02–0.80 mg/L Zn-Trace or  
0.024–0.96 mg/L Zn-Trace 902 (Crack-Set LCW902)

LCS360

**Scope and application:** For wastewater, drinking water, surface water, raw water and process analysis.



## Test preparation

### Test storage

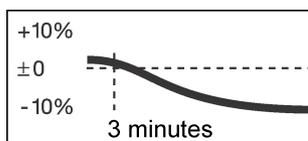
Storage temperature: 15–25 °C (59–77 °F)

### pH/Temperature

The pH of the water sample must be between pH 2.5–11.

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

### Time dependence



The final extinction is achieved after 3 minutes. If the reaction time is exceeded the results will be too low by a considerable amount.

### Before starting

#### Analytical Quality Assurance

**addista** is an analytical quality assurance system to check the accuracy and precision of the analysis results at any time. Regular checks ensure that the measurement system is functioning properly and is being correctly operated, and reveal sample-specific interferences.

**For trace analysis** the standard solution has been diluted by a **factor of 4**. After dilution the following nominal values are obtained:

**Standard** : 0.5 mg/L Zinc

**Range of confidence**: 0.48–0.52 mg/L Zinc

Review safety information and expiration date on the package.

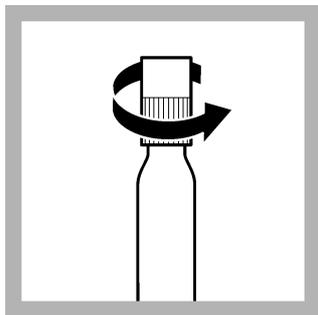
Review the Safety Data Sheets (MSDS/SDS) for the chemicals that are used. Use the recommended personal protective equipment.

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.

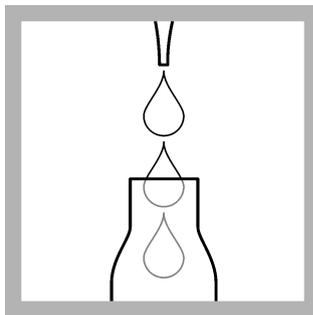
## Procedure



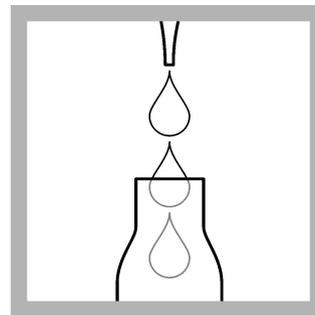
1. **Sample cuvette** preparation: Carefully remove the foil from the screwed-on **DosiCap Zip**.



2. Unscrew the **DosiCap Zip**.



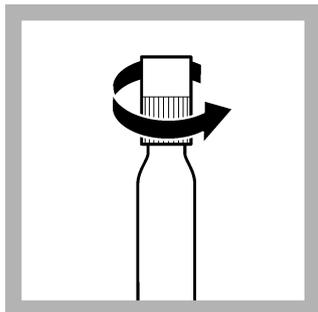
3. Pipet **2.5 mL sample**.



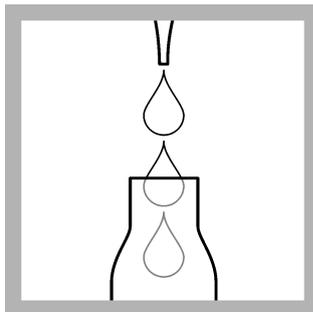
4. Pipet **0.2 mL solution A**.



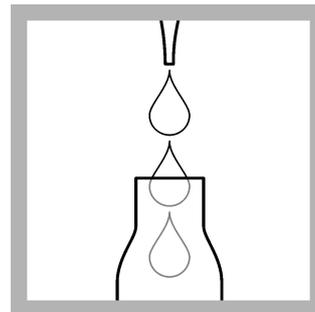
5. **Blank-value cuvette** preparation: Carefully remove the foil from the screwed-on **DosiCap Zip**.



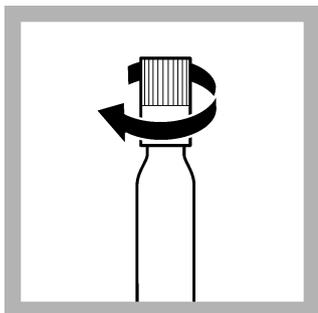
6. Unscrew the **DosiCap Zip**.



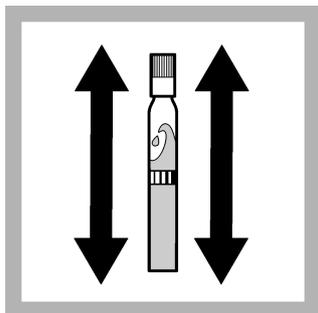
7. Pipet **2.5 mL distilled water**.



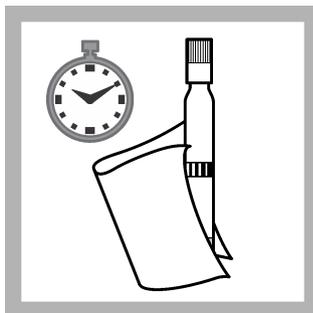
8. Pipet **0.2 mL solution A**.



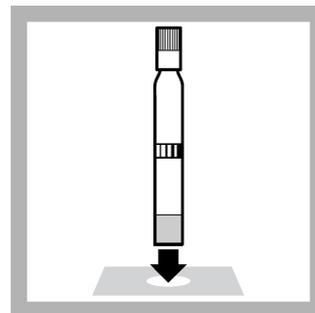
9. **Immediately** screw the **DosiCap Zip**, with the fluting at the top, back onto each cuvette.



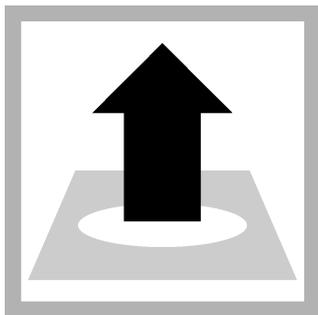
10. Shake **vigorously** 2 or 3 times.



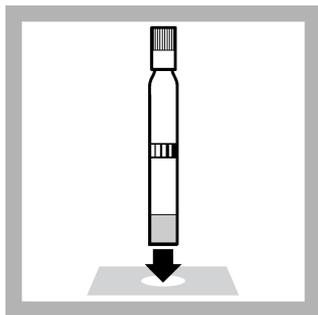
11. After **3 minutes**, thoroughly clean the outside of the cuvettes and evaluate.



12. Insert the **blank-value cuvette** into the cell holder. Go to **Stored Programs**. Select the test: push **ZERO**.



13. Remove the blank-value cuvette.



14. Insert the **sample cuvette** into the cell holder. 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. There is no interference from:

Interference level	Interfering substance
2000 mg/L	SO <sub>4</sub> <sup>2-</sup>
1000 mg/L	Cl <sup>-</sup> , Na <sup>+</sup> , K <sup>+</sup>
500 mg/L	NO <sub>3</sub> <sup>-</sup>
250 mg/L	Ca <sup>2+</sup> , Mg <sup>2+</sup>
50 mg/L	Ni <sup>2+</sup> , Cr <sup>6+</sup> , CO <sub>3</sub> <sup>2-</sup>
10 mg/L	Co <sup>2+</sup> , Cu <sup>2+</sup> , Cr <sup>3+</sup>
5 mg/L	Fe <sup>2+</sup> , Fe <sup>3+</sup> , Sn <sup>2+</sup>
1 mg/L	Pb <sup>2+</sup>

Undissolved zinc or zinc contained in complexes can only be determined after digestion with Crack-Set LCW902.

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

## Summary of method

Zinc ions form a water-soluble orange-red complex with 4-(2-pyridylazo)-resorcin (PAR) at pH 6–11.



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