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# Method:

Detection of anorganic arsenic(III) and arsenic(V) compounds in water samples results from adding zinc powder and a solid acid. Arsenic hydride is liberated which reacts with mercury(II)bromide contained in the test field to form yellow through brown arsenic-mercury halogenides. An oxidizing agent is also added for the elimination of interfering sulfide ions (false positive results).

#### Content:

1 aluminum container with 100 test strips 2 reaction vessels incl. screw cap bottle of As-I 2 colored measuring spoons

1 bottle of As-II 1 color scale

1 bottle of As-III 1 waste bag for used test strips

#### Precautions:

Each test field on the test strips contains mercury(II)bromide. Toxic in contact with skin. As-II contains sulfamic acid: Causes skin irritation. Causes serious eye irritation. Harmful to aquatic life with long lasting effects. Wear protective gloves/eye protection. IF ON SKIN: Wash with plenty of soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. As-III contains zinc powder: Very toxic to aquatic life with long lasting effects. Avoid release into the environment.

## General indications:

Remove only as many test strips as are required. Close the container immediately after removing the strips. Do not touch the test field.

# Instructions for use:

- 1. Fill reaction vessel up to the label (100 mL) with the sample solution
- 2. Add 2 drops of As-I
- 3. Shake gently for 2 seconds
- 4. Add 1 level spoon (white!) of As-II
- 5. Shake gently for 2 seconds
- 6. Add 1 level spoon (red!) of As-III
- 7. Shake gently for 2 seconds
- 8. Close reaction vessel with screw cap
- 9. Raise the opening in the screw cap
- 10. Insert the test strip through the opening into the reaction vessel
- 11. The test pad must show in the same direction as the green circle on the opening
- 12. Completely close the opening, so that 2 cm of test strip stick out from the opening
- 13. Wait 15 minutes
- 14. Raise the opening and take out the test strips
- 15. Dip test strip into water for 2 seconds
- 16. Shake off excess liquid
- 17. Compare test strip to color scale

# Interferences:

The following ions interfere with the determination only when the concentrations below are exceeded:

1000 mg/L: Ca<sup>2+</sup>, K<sup>+</sup>, Mg<sup>2+</sup>, Na<sup>+</sup>, Zn<sup>2+</sup>, Cl<sup>-</sup>, CN<sup>-</sup>, CO<sub>3</sub><sup>2-</sup>, SO<sub>4</sub><sup>2-</sup>, EDTA; 500 mg/L: Fe<sup>2+</sup>, Fe<sup>3+</sup>, F<sup>-</sup>; 100 mg/L: Al<sup>3+</sup>, Sn<sup>2+</sup>, CrO<sub>4</sub><sup>2-</sup>, NO<sub>2</sub><sup>-</sup>, NO<sub>3</sub><sup>-</sup>, PO<sub>4</sub><sup>3-</sup>; 25 mg/L: ClO<sub>3</sub><sup>-</sup>; 5 mg/L: Co<sup>2+</sup>; 2 mg/L: S<sup>2-</sup>, SO<sub>3</sub><sup>2-</sup>; 1 mg/L: Ni<sup>2+</sup>; Sb<sup>3+</sup>, SeO<sub>3</sub><sup>2-</sup>; 0,5 mg/L: Ag<sup>+</sup>, Cu<sup>2+</sup>.

#### Storage:

Avoid exposing the strips to sunlight and moisture. Keep container cool and dry (storage temperature between 4 °C and 35 °C). If correctly stored, the test strips may be used until the use-by-date printed on the packaging.

## Additional information:

The test strip container stopper contains a non-toxic drying agent. If swallowed, drink plenty of water.

Revised: 2011-01

## **Explanation of symbols**

	Use by	LOT	Lot number
REF	Catalog number	Σ	Package content
1	Keep container closed	<b>T</b>	Protect from humidity
1	Storage temperature	<u>^</u> !\	Observe the safety precautions in instructions

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