



Lead Ions (Pb+2) Rapid Test Strips (Water) (DTS802L)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Size 50T

Intended Use

The Pb+2 (Lead Ions) test strip is a lateral flow chromatographic immunoassay for the detection of Pb+2 in water sample.

General Description

Lead contamination is a serious worldwide environmental problem. As it is difficult to detoxify by chemical or biological methods, gradual lead ion accumulation in the nervous and cardiovascular systems of the human body can subsequently cause serious diseases. In the U.S., the National Primary Drinking Water Regulations (NPDWRs) limit for the action level of lead ion contaminants in drinking water is 15 ng/mL. Long-term health consequences of drinking lead-contaminated water include kidney problems and high blood pressure for adults, and the physical and mental development delays in infants and children. Lead contamination in water has attracted significant attention around the World, and fast and sensitive methods for monitoring water quality are for protecting human and animal health in great demand. The lateral flow assay (LFA) has emerged as a powerful analysis platform for detecting various analytes including small molecules, such as pesticides, biotoxins and heavy metals, due to its speed, simplicity and low-cost characteristics.

Principles of Testing

According to the colloidal gold principle of competition method, Anti-Pb+2-ITCBE monoclonal antibody was conjugated to colloidal gold and Pb+2-ITCBE-BSA antigen was coated to develop a test strip for detecting Lead ions in tap water. The threshold value of the test strip is around 10ppb (based on source of water sample).

Reagents And Materials Provided

1. 0.1 M HEPES, 1 vial
2. 10 mM ITCBE, 1 vial
3. Lead ions test strips, 50 strips/bottle

Materials Required But Not Supplied

1. Pipette (20-200 μ L, 100-1000 μ L, 1-10 mL)
2. Consumables: gun tip, disposable gloves, centrifuge tube

Storage

The test strips and microwells should be stored in a cool and dry place at 2-8 °C, avoiding freezing.

Specimen Collection And Preparation

Take 100 µL tap water sample into a new centrifuge tube, add 10 µL 0.6 mM ITCBE and mix well (Pipette repeatedly ten times).

Reagent Preparation

0.6 mM ITCBE, dilute 10 mM ITCBE to 0.6 mM with 0.1 M HEPES.

Notice: Prepare the solution fresh.

Assay Procedure

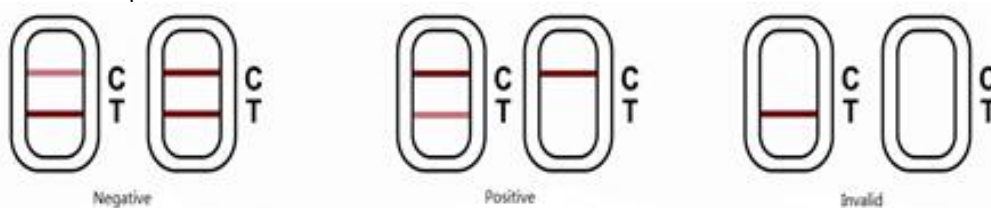
1. Insert a test strip into the centrifuge tube of well-mixed sample.
2. Let the test strip stand for 15 minutes and observe the result.

Interpretation Of Results

Negative (-): Color of Test Line(Line T) is deeper than Control Line(Line C) or the same color, indicating that the content of lead ion in sample is lower than the LOD (10ppb) of the kit.

Positive (+): No color shows in Test line(Line T) or Color of Test Line(Line T) is lighter than Control Line(Line C) indicating that the lead ion in sample is higher than the LOD (10 ppb) of the kit.

Invalid: No color shows in Control Line(Line C), indicating the operation is incorrect or the test kit is out of date. In this case, please read the instruction again carefully, and repeat the assay with a new test strip.



Detection Limit The minimum detection limit of test strips for lead ions is 10 ppb.

- Precautions**
1. Please test according to the assay steps. Don't touch the white membrane surface in the center of the test card. Avoid the sunlight when testing.
 2. The card is one-off, Please don't use it for twice time.
 3. The solution of different batches should not be mixed.
 4. Using the gloves when test.
 5. The test result is only for reference. Please confirm according to the relative standard methods of country.