FIRST ALERT™

# WATER AND LEAD TEST KIT

## PLEASE READ INSTRUCTIONS CAREFULLY BEFORE USE!

### DIRECTIONS FOR USE:

This water and lead test kit utilizes two different methods for testing:

1. **"Rapid Method"** gives you qualitative ''yes" or "no" results.
2. **"Patented Leach Method"** gives you semi-quantitative results which indicate the approximate lead release in the sample.

### TESTING PRECAUTIONS:

- Perform all testing in a well-ventilated area- outdoors, if possible
- Avoid contact with Indicator Solution
- Wash hands with soap & water after handling items which have tested positive for lead

**Note:** Any clear vinegar may be used for all tests.

### ⚠WARNING

**MAY IRRITATE EYES AND SKIN.** Do not mix with strong acids. Do not swallow. Do not get in eyes or on skin. Do not breathe fumes.

**KEEP OUT OF REACH OF CHILDREN.**

**FIRST AID TREATMENT:** Contains sodium sulfuret. If swallowed call a Poison Control Center or doctor immediately. **Do not induce vomiting. If in eyes, rinse well with water for 15 minutes. If on skin, rinse well with water.**

**DETERMINE THE BEST TYPE OF TESTING FOR THE SAMPLES YOU WISH TO TEST:**

### RAPID METHOD INSTRUCTIONS

Use this method to quickly test for surface lead on: painted surfaces, dishes, fine china, pottery, ceramicware, mini-blinds, circuit boards, toys, bathtub glazes, antiques, food can seams, plumbing fixtures, solder, lead foil & ceramic tile. *For all other testing, use the Patented Leach Method for best results.*

1. **CLEAN AREA:** Clean the area of any dust or dirt. (To test paint, score the surface with a sharp knife to penetrate all layers.) Perform all testing in a well ventilated area, if possible. Cut swab sticks in half with scissors to get 4 swab tips.
2. **ACTIVATE:** Activate a swab tip by inserting (or dipping) into the Indicator Solution vial.
3. **RUB:** Gently rub the surface to be tested with the cotton swab tip for about 30-60 seconds. **If the surface or swab tip turns YELLOW, BROWN or BLACK, LEAD IS PRESENT.** If there is no color change, no lead is present.

Resulting swab sticks may be safely disposed of by rinsing under cold tap water, then placing in your normal garbage. Wipe all surfaces/items with soap & water after testing.

### PATENTED LEACH METHOD INSTRUCTIONS:

Use this method for sensitive testing of: multi-layered or dark colored paint/paint chips, soil, dust samples, dishes, pottery, ceramic ware, fine china, jewelry, candle wicks and any other materials.

1. You must first prepare your samples. See "Sample Preparation" procedures noted below. Then test samples as follows:
2. After allowing to stand in vinegar for at least 4 hours, fill the supplied plastic test tube about 1/4 full with the test vinegar.
3. Activate a swab tip by inserting (or dipping) into the Indicator Solution.
4. Place activated swab tip into the vinegar solution. Replace cap and invert the tube once to mix. (Use in a well ventilated area, if possible).

If after about 30 seconds:

a) the resulting solution remains clear or turns milky (cloudy) white, there is no leachable lead.

b) if the resulting solution turns even slightly **YELLOW, BROWN or BLACK in color, the item contains leachable lead.**

In general, the darker the color produced, the higher the concentration of leachable lead. Note that the lower detectable limit of the kit is 1 ppm lead (very faint yellow tint).

5. The resulting test solution may be safely disposed of by flushing down the sink. Rinse the test tube & cap well with cold tap water. You are now ready for further testing. Drying of tube is not necessary.

Wash all surfaces/items with soap & water after testing.

| RESULTANT COLOR (ppm) (approx. lead release*) | |
|---|---|
| Faint yellow tint | 1-3 ppm |
| Light brown | 5 ppm |
| Medium brown | 10 ppm |
| Dark brown | 25 ppm |
| Black | 50+ ppm |

### SAMPLE PREPARATION:

Follow instructions below to prepare samples for testing:

**A) WATER**
**B) POTTERY, DISHES, FINE CHINA AND CERAMICWARE**
**C) PAINT CHIPS**
**D) SOIL**
**E) JEWELRY, CUTLERY, CANDLE WICKS**
**F) SOLDER**
**G) DUST WIPE TEST**
**H) LEAD FOILS**
**I) MINI BLINDS**
**J) ANY OTHER ITEMS YOU WISH TO TEST**

**A) WATER**

1. Fill the supplied test tube about one half full with a sample of water that you wish to test. To get a good sample of potable water, allow tap water to sit in the plumbing pipes overnight or over the weekend. Fill a plastic pitcher from the cold water tap first thing in the morning. This will give you the "worst case scenario" for dissolved lead in your water supply plumbing.
2. Test samples as noted in RAPID METHOD INSTRUCTIONS above.

Although the kit will not detect sub micro levels of lead in parts per billion, this procedure will alert users to high levels of lead which require immediate action.

**B) POTTERY, DISHES, FINE CHINA AND CERAMICWARE** (includes coffee mugs, tea cups, plates, bowls, pitchers, lead crystal containers, glassware etc.)

1. Wash, rinse and dry the item you wish to test.
2. Fill the item with white vinegar to cover the food contact surface. Fill to maximum capacity as a defective glaze may be localized. Be sure to cover all decals and any coloration. Only one item of a set (plate, saucer, cup etc.) needs to be tested.
3. Allow to stand uncovered for a minimum of 4 hours.
4. Test as noted in PATENTED LEACH METHOD INSTRUCTIONS above.

This method is excellent for detecting very low levels of lead in dinnerware.

**C) PAINT CHIPS** (all painted surfaces including multi-layered paints, toys, furniture, antiques etc.)

1. Place some paint scrapings or chips that you wish to test into a small, lead free container (plastic or glass). You can get a good paint sample from under a window sill, base trim, underneath furniture, antiques, and on the base of toys etc. Using a knife, gently scrape the test area to get all layers of paint. Avoid removing any of the "base" substrate like metal or wood (drywall o.k.) as these materials may interfere with the test results.
2. Add white vinegar to slightly cover the paint chips.

OVER ▸

***C) PAINT CHIPS (CONTINUED)...***

3. Allow to stand uncovered for a minimum of 4 hours.
4. Test samples as noted in PATENTED LEACH METHOD INSTRUCTIONS above.

This test procedure is superior to the Rapid Test Instructions when testing dark colored paints (ie. brown or black), as the color of paint may obscure the reading on the swab tip. Avoid contact with bare wood surfaces as the solution may react with wood fibers, producing a black discoloration that is indistinguishable from a positive test for lead.

**D) SOIL** (exterior ground soils)

1. Obtain a representative sample of dry soil from the area you wish to test. Scrape the top 1/8" to 1/4" off of the ground surface and mix well.
2. Transfer 1/2 teaspoon (2.5 ml) of soil into a glass measuring cup (or a lead free container - plastic or glass) and then add 250 ml (1 cup) of white vinegar.
3. Allow to stand uncovered for a minimum of 4 hours.
4. Test samples as noted in PATENTED LEACH METHOD INSTRUCTIONS above.

The dilution factor for the above test procedure is 100: 1. Therefore multiplying the lead release result obtained by 100 will give approx. lead release in parts per million (ppm) in soil sample.

**E) JEWELERY** (children's rings, bracelets, trinkets, etc.), **CUTLERY** (includes spoons, forks, knives etc.), **CANDLE WICKS** (1/2" to 1" long. Remove as much wax as possible)

1. Place the item that you wish to test into a lead free container (plastic or glass).
2. Add white vinegar to cover part, or all, of the item.
3. Allow to stand uncovered for a minimum of 4 hours.
4. Test samples as noted in PATENTED LEACH METHOD INSTRUCTIONS above.

*If you get a positive test, do not use items that will be in contact with food or drink or children.*

**F) SOLDER** (includes plumbing materials, food can seams and bath tub glazes, electronic assemblies, circuit boards).

**Use the Rapid Method Instructions. Note:** Hold activated swab tip on solder surface only and rotate in a circular motion. Avoid swab tip contact with adjoining surfaces of copper as a metallic film could deposit and give a false positive reading.

For food can seams, gently rub swab tip along the seam.

For bath tub glazes, simply use the **Rapid Method Instructions.**

**Note:** Avoid use on brass fixtures as copper (used in brass) will produce a metallic film that is indistinguishable from the color produced by lead. For a more sensitive test, you may use the vinegar leach test.

1. Place the item (or piece of the item) in a small amount of white vinegar.
2. Allow to stand uncovered for a minimum of 4 hours.
3. Test samples as noted in PATENTED LEACH METHOD INSTRUCTIONS above.

**G) DUST WIPE TEST** (from construction or renovation areas)

1. Dampen a swab tip with water. Use a damp swab to slowly collect a sample of dust from the area to be tested.
2. Place the swab into a small lead free container (plastic or glass).
3. Add white vinegar to cover the swab tip.
4. Allow to stand uncovered for a minimum of 4 hours.
5. Test samples as noted in PATENTED LEACH METHOD INSTRUCTIONS above.

**If you get a positive response, lead is present** and the area should be thoroughly cleaned with a damp mop/rag soaked in Trisodium Phosphate (TSP) cleaner, available at your local hardware store. You can also vacuum with a High Efficiency Particle Accumulator (HEPA) filter which may be bought/or rented from a "Lead Abatement & Removal" company. See your Yellow Pages under "Lead Abatement & Removal."

**H) LEAD FOILS** (wine bottle wrap)

A white powder on the foil is a good indication that it contains lead. **Use the Rapid Method Instructions.** Avoid swab tip contact with the cork as the solution may react with cork giving a false positive reading. *If you get a positive result, remove foil and wipe area with vinegar before uncorking bottle.*

**I) MINI BLINDS** (1" PVC plastic type) PVC mini blinds produced overseas (prior to 1997) have been found to contain high levels of lead in the formulation. Use the Rapid Method Instructions.

**J) ANY OTHER ITEMS YOU WISH TO TEST**

1. Place the item that you wish to test into a small lead free container (plastic or glass).
2. Add white vinegar to cover part, or all, of item.
3. Allow to stand uncovered for a minimum of 4 hours.
4. Test samples as noted in PATENTED LEACH METHOD INSTRUCTIONS above.

If item is too big (or impracticable) to submerge in vinegar, simply rinse the item repeatedly with vinegar, then test the vinegar for lead using the Patented Leach Method.

**INTERFERENCE:**

*Disclaimer: Other toxic metals will also give a positive response (indistinguishable from lead) if copper or bismuth is present. This is of little concern as these elements are not usually present in the items that can be tested with the kit. If the items were properly manufactured, they would not release these toxic metals in amounts that would give a positive response using this testing procedure.

## WARRANTIES

This test kit is not intended to replace a professional inspection by an accredited commercial laboratory. The water and lead test kit will detect high lead levels that exceed government guidelines. No guarantees are intended or implied.

## LIABILITY

The manufacturer assumes no liability for the misuse of the water and lead test kit or for the interpretation of the results by the user. This kit is intended for household use only and only as a prescreen for lead. If lead contamination is suspected based upon this test, consult a deleading specialist, a professional testing laboratory or your local Health Department.

FIRST ALERT™



**M08-0132-163883**