

LEAD IN CERAMICWARE

Lead-containing glazes are used in the ceramic industry on pottery, earthenware, bone china and porcelain. Lead glazes produce a smooth, shiny and sanitary surface that is pleasing to the eye and easy to clean. Lead may leach out of the glazes on ceramicware for two reasons. First, if a glaze is incorrectly formulated OR if the item is improperly fired during the manufacturing process, hazardous levels of lead may leach from the glazed dishes into the food placed on them. Imported ceramicware is more likely to leach lead than those manufactured in the USA. Second, glazes on lead-safe ceramicware can begin to break down through use or damage and the lead can then leach out. Repeated cycles through the dishwasher over years of everyday use can cause the glazes on dishes to break down, allowing lead to leach into the food placed on them. Cracks or chips that develop on the dishes are other sources of leaching lead.

Acidic foods such as citrus fruit juices, coffee, tea, tomato-based foods (e.g. tomato juice, spaghetti sauce), wines and vinegar-containing foods cause more lead to leach from the glazes into the food than do non-acidic foods such as water or milk. More lead leaches into hot food than into cold food. Heating food on ceramicware in a microwave oven increases the rate at which lead leaches from lead glazes. DO NOT store food in lead-containing ceramicware.

Protocol for testing dish sets:

Because a new set of dishes often arrives from the manufacturer coated with a fine lead-containing dust, you should wash new dishes first with mild detergent, and rinse and dry them thoroughly before you test them. Although a set of dishes is purchased at the same time, the manufacturers cannot guarantee that all the dishes were produced or fired at the same time. It is possible that a few items in any given set of dishes may leach high levels of lead. Testing only one dish from a set is not necessarily representative of the set. Initially test about 10% of a set of dishes. For example, randomly select six dishes, bowls or mugs from a set of 60 pieces to test. For sets that are older, select pieces that have been used most often or have chips or cracks. If any of the selected items test positive for lead, consider testing all the pieces in the set. If you own several sets of ceramicware, you should test the set used everyday or most frequently first.

Test Method:



1. Wash test dishes with mild detergent, rinse and dry before testing.
2. Activate a LeadCheck[®] Swab according to the Instructions supplied with the kit.
3. Immediately rub the activated Swab over the surface of the dish while you squeeze the liquid out for 30 seconds.
4. Be sure to rub over each colored glaze used in the pattern and any cracks or chips on the dish.
5. Examine the Swab tip and or the dish surface for any pink or red color.
6. After performing the test, wash it thoroughly with an all-purpose household cleaner.

Interpretation of results:

1. If an unmistakable pink color appears on the swab and/or on the ceramic surface, lead is leaching from the piece at a hazardous level. **Do not eat or drink from items that test positive.** The pink or red color is not toxic and will not stain your dishes.
2. If no pink or red color is observed either on the dish or on the Swab tip, then a hazardous level of lead is NOT leaching from that dish.

*LeadCheck[®] Swabs are a versatile and sensitive screening tool for the detection of lead on any surface. This applications note provides a suggested test method for a specific application. Additional information and help are available by calling 800-262-5323 or 508-651-7881.