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### **CPSC Staff Study: Home Lead Test Kits Unreliable**

WASHINGTON, D.C. - The U.S. Consumer Product Safety Commission (CPSC) today announced the results of a special evaluation of consumer lead test kits. CPSC staff used commonly available test kits on a variety of paints and other products containing different levels of lead. Many of the tests performed using the kits did not detect lead when it was there (false negatives); some indicated lead was present when it was not (false positives). Of 104 total test results, more than half were false negatives, and two were false positives. None of the kits consistently detected lead in products if the lead was covered with a non-lead coating. Based on the study consumers should not use lead test kits to evaluate consumer products for potential lead hazards. These findings are consistent with previous CPSC staff test results.

CPSC staff studied two common types of home lead test kits that are based on chemical reactions involving rhodizonate ion or sulfide ion. Most test kits were developed to detect levels of lead in household paint that are usually much higher than CPSC's regulatory maximum level of 0.06%. As a result, staff found that these kits may not be useful for detecting relatively low lead paint concentrations or for detecting lead in other materials, such as metal jewelry or vinyl products. Also, both types of kits may be affected by substances such as iron, tin, or dirt, or by paint colors that can cause the color in the test kit to change or hide the color change, thereby interfering with interpretation of the test results.

As part of the study of lead test kits, CPSC staff also evaluated the use of x-ray fluorescence (XRF) for screening for lead in paint and other products. Twelve of 13 samples were correctly identified as containing lead. The staff notes that this technology may be of use by a professional inspector for screening for the presence or absence of lead in products, particularly for surface level lead. However, XRF detectors are generally not available for consumer use. Further, use of an XRF device requires knowledge, training and consideration of its limitations. For example, XRF detectors have limited depth of penetration so, for certain applications such as children's metal jewelry, it is possible for the surface coating to mask the presence of potentially hazardous leaded base metal underneath.

Consumers should exercise caution when using these test kits to evaluate consumer products for potential lead exposures. False results can make it difficult or impossible for consumers to determine the proper course of action to take. In fact, CPSC staff has tested a number of other samples that had been identified by consumers and others based on their use of inexpensive test kits as having high lead levels. To date, none of these items has actually had high lead levels based on CPSC lab analysis. This is another indication of the poor reliability of the kits for this purpose. Testing by a qualified laboratory and trained personnel is the only way to accurately assess the potential risk posed by a consumer product that may contain lead.

Consumers can stay informed of lead-related recalls by signing up for email announcements at [www.cpsc.gov](http://www.cpsc.gov) <<http://www.cpsc.gov>>. Consumers who suspect that their child has been exposed to excessive levels of lead, should immediately contact a physician.