



FOR IMMEDIATE RELEASE
July 21, 2011

Contact: Patricia Dillon, Program Manager
Toxics in Packaging Clearinghouse
Tel: (802) 254-8911
Email: info@toxicsinpackaging.org
www.toxicsinpackaging.org

CAUTION on TEST RESULTS for TOXICS IN PACKAGING

Lab Results May Not Be Accurate, Exposing Companies to Unnecessary Financial Risk

Sixteen percent of laboratory test results for lead and cadmium in packaging samples were “unacceptable” according to [a report](#) just released by the [Toxics in Packaging Clearinghouse](#) (TPCH).

The TPCH sent packaging samples to six private analytical laboratories and the California Department of Toxic Substances Control Environmental Chemistry Laboratory. The samples were used to assess performance in testing for toxic metals in packaging. Specifically, the study assessed the performance of laboratories in measuring the total concentrations of four metals – lead, cadmium, mercury and chromium. The use of lead, cadmium, mercury and hexavalent chromium is restricted in packaging by law in 19 U.S. states.

Over half the laboratories (4 of 7) reported one or more unacceptable results. One of the most shocking outcomes of the study was for a laboratory with offices nation-wide that reported inaccurate results for 5 of the 8 packaging samples they tested. A result was considered unacceptable if it varied by more than 25 percent from the average of all laboratories’ results, as well as from an x-ray fluorescent (XRF) analysis.

“The good news is that only one packaging sample of the 42 analyzed (<2 percent) by the seven labs resulted in a ‘false negative.’ A false negative is a test result indicating the sample **is** in compliance with state laws when it isn’t. Such results could lead a company to believe they are in compliance with our state laws when they are not,” according to Dr. Alex Stone, a chemist with the Department of Ecology in Washington State.

Overall, the quality and consistency in laboratory testing results was better than the TPCH expected, given past experiences with laboratory test data.

For the last five years, the TPCH has screened packaging for compliance with state toxics in packaging laws using XRF analysis. XRF analysis is a rapid and inexpensive screening tool for measuring the elemental composition of samples, including the four metals regulated by state laws. TPCH expected XRF screening results of packaging samples to have some level of correlation with laboratory analysis, and was surprised this was not often the case.

“We believe that the discrepancy between XRF and laboratory analysis can be traced to the selection of sample preparation methodologies,” said Ron Ohta of the California Department

of Toxic Substances Control, which funded the TPCH study. “Measuring the total concentration of metals requires that the sample be completely dissolved. We don’t believe that some labs are paying careful enough attention to this critical performance goal, resulting in analytical results that underreport the amount of heavy metals, particularly cadmium and lead, used in packaging.”

“The point of the study was not to call attention to labs that performed poorly. Rather, we want to make sure that labs who provide support services to companies are applying testing methods consistent with the requirements of toxics in packaging laws.” Ron Ohta added. “It’s in everyone’s best interest that testing is done properly. Otherwise we end up with non-compliance situations and manufacturers and retailers pulling packaging off retail shelves, which is costly.”

The TPCH report emphasizes the importance of communicating to laboratories test requirements and data quality objectives. Specifically, total concentration of the restricted metals is possible only through complete sample decomposition. If total sample decomposition is not achieved, the laboratory should state so on the test report, as it strongly impacts the accuracy of the results.

The [California Department of Toxic Substances Control](#) (DTSC) contracted with TPCH to perform this round-robin study. The report, [Laboratory Round Robin Test Project: Assessing Performance in Measuring Toxics in Packaging](#), is available for download on the TPCH website. A [guidance document](#) on laboratory analysis is also available.

Nineteen U.S. states have toxics in packaging laws. Of the 19 states with laws, 10 states -- California, Connecticut, Illinois, Iowa, Minnesota, New Hampshire, New Jersey, New York, Rhode Island, and Washington – are members of the TPCH.

Penalties for non-compliance with state laws vary. In New York, for example, the penalties for violations of the Hazardous Packaging Act are up to \$10,000 for the first violation and up to \$25,000 per violation for each violation thereafter. Each package on the shelf constitutes a separate and distinct violation.

The [Toxics in Packaging Clearinghouse](#) was created to support states and help coordinate the implementation of individual states' toxics in packaging laws. The TPCH, which is administered by the Northeast Recycling Council, Inc. (NERC), serves as a central location for processing information requests from external constituencies and promoting compliance with the laws.