Paraguay Paint Report, Executive Summary

In October 2011, the Non-Governmental Organization ALTERVIDA from Paraguay purchased 15 cans of enamel decorative[1] paints from local hardware stores and paint importers in and around Asuncion. Samples of the paints were analyzed for total lead content (dry weight) by the H & E Laboratory at the University of Cincinnati (UC). The laboratory is accredited by the American Industrial Hygiene Association (AIHA) under the US Environmental Protection Agency (USEPA) Environmental Lead Laboratory Accreditation Program.[2] The laboratory also participates in the Environmental Lead Proficiency Analytical Testing program operated by the American Industrial Hygiene Association established by the USEPA.

Summary of Results of paint lead levels in Paraguay

Number of paints analyzed	15
Percent analyzed paints with lead concentration above 90 ppm	27%
Percent analyzed paints with lead concentration above 600 ppm	27%
Percent analyzed paints with lead concentration above 10,000 ppm	20%
Highest lead concentration detected	169,000 ppm

Four of the 15 paints analyzed contained lead both above the proposed acceptable limit of 90 ppm, as well as above 600 ppm. Three of the paints contained dangerously high lead levels above 10,000 ppm.

[1] The term "*decorative paint*" as used in this report refers to paints that are produced for use on inside or outside walls and surfaces of homes, schools, commercial buildings and similar structures. Decorative paints are frequently used on doors gates and windows, and to repaint household furniture such as cribs, playpens, tables and chairs. The term "*enamel*", as used in this report, refers to oil-based paints.

[2] The accreditation program operated by AIHA meets all international program requirements which comply with ISO/IEC 17025 and subsequently ISO/IEC 17011. AIHA is a full member of the International Laboratory Accreditation Cooperation (ILAC). The AIHA accreditation program is recognized globally.

The highest level detected was 169,000 ppm, in a yellow paint, which is approximately 1,880 times the proposed acceptable limit of 90 ppm.

This report confirms earlier findings that brightly colored paints contain the highest lead concentrations.[3] Fifty percent of the red paints (one of two paints) and 40 percent of the yellow paints (two of five paints) contained not only lead levels above 90 ppm, but dangerously high levels above 10,000 ppm. Only one of the five white paints contained levels of lead above 600 ppm.

The paints analyzed represent five brands, two manufactured in Paraguay and three in Brazil. The three brands manufactured in Brazil have headquarters in Brazil, the United States and Germany, respectively. None of the paints manufactured in Brazil contained lead levels above 90 ppm, whereas four out of six paints manufactured in Paraguay contained high levels of lead. In fact, three of the paints manufactured in Paraguay contained dangerously high lead levels (above 10,000 ppm). These paints represented both brands from Paraguay.

Conclusions & Recommendations

This study shows that high levels of lead are found in enamel decorative paints sold in Paraguay. This is a serious concern for the health of the children in Paraguay.

In addition, the paints produced in Paraguay contain high levels of lead whereas the paints produced in Brazil contain low levels of lead. Although the number of paints included in this study is limited, it appears to be the only such study ever undertaken. The results indicate that there might be concern that other national paint manufacturers not included in this study may also produce paints with high lead content.

Most countries neighboring Paraguay have legislation in place limiting the allowed lead content of enamel decorative paints, e.g. Brazil, Argentina and Uruguay have set the limit to 600 ppm. NGOs associated with the IPEN network generally promote the 90-ppm standard as one that is fully achievable and protective. It is clear that legislation regarding allowed lead concentrations in paints, and a mechanism for its enforcement, also should be introduced in Paraguay.
ALTERVIDA recommends:

[3] C. Scott Clark, et al, Lead levels in new enamel household paints from Asia, Africa and South America, Environmental Research, Volume 109, Issue 7, October 2009, Pages 930-936, ISSN 0013-9351, http://dx.doi.org/10.1016/j.envres.2009.07.002.

Government and relevant agencies: Regulate the lead content of paint imports, manufacturing and sale to a maximum of 90 parts per million (ppm) total dry weight lead content. Paint can labels should be required to alert users to the hazards of lead-contaminated dust and other materials when previously painted surfaces are scraped or sanded in preparation for repainting.

The private sector: We strongly recommend a switch to safer non-lead alternatives for paint ingredients. These substitute materials are available in the market at an affordable price.

Consumers and individuals as well as organizations: Choose unleaded paints in your purchases to protect the health of the children and all the members of the family.

All stakeholders: Cooperate in establishing a reliable third-party certification system of lead in paint to ensure the paints sold in the market meet the acceptable limit of 90 ppm. Encourage the training in lead-safe work practices for painters and others when working on surfaces previously painted to minimize exposures.