The Rapid Market Screening program aims to enhance our collective understanding of consumer products and foods that contribute to lead poisoning in low- and middle-income countries. By analyzing lead concentrations in thousands of products and foods from markets across 25 low- and middle-income countries, the Rapid Market Screening (RMS) aims to identify and highlight lead exposure sources that deserve more attention.

**BACKGROUND**

The types of products sampled through the RMS were selected following a series of Desk Assessments that reviewed literature on lead concentrations in a variety of products in LMICs. 10 product types were selected for analysis, including spices, ceramic foodware, metal foodware, plastic foodware, herbal/traditional medicines, cosmetics, sweets, toys, paints, and staple starches.

An RMS protocol was developed by Pure Earth staff with external expert review. The primary analytical tools used for the RMS were portable X-ray fluorescence analyzers (XRF). The protocol outlined how to prepare the item for testing and specified the number of XRF readings required for each item.

Pure Earth is conducting laboratory analyses on a subset of samples using inductively coupled plasma mass spectrometry to understand the correlations between XRF results and lab results. For aluminum foodware, Pure Earth is conducting leachate tests to improve our understanding of the relationship between total lead concentrations and potential doses from regular use.

**METHODOLOGY**

25 desk reviews on previous research on lead poisoning and contamination in local products and foods in each country

2,711 samples of market products collected and analyzed

15 out of 25 total countries completed the RMS as of January 2023

**LOCATIONS**

The RMS is being conducted in 25 countries. As of January 2023, 15 countries and Indian states have completed the RMS, including Armenia, Bangladesh, Bolivia, Colombia, Georgia, Ghana, the Indian state of Tamil Nadu, Indonesia, Kazakhstan, Mexico, Peru, the Philippines, Tajikistan, Tanzania, and Vietnam.

**NEXT STEPS**

Pure Earth will complete the RMS in 25 countries and Indian states in 2023. We anticipate adding results from Azerbaijan, Egypt, Kenya, Kyrgyzstan, Nepal, Nigeria, Pakistan, Tunisia, Turkey, Uganda, and the Indian states Uttar Pradesh and Maharashtra.

Pure Earth intends to submit the full RMS findings to a peer-reviewed journal in 2023 and will disseminate the findings widely once published. Pure Earth will use the RMS findings to orient our future research and intervention strategies toward the most consequential and tractable lead exposure sources.