



Solve pollution. Save lives. Protect the planet.

# COSMETICS INVESTMENT OPPORTUNITY TO REDUCE LEAD POISONING

Lead often turns up in cosmetics and is frequently added intentionally because it accentuates cosmetic colors and helps products resist moisture. Dozens of countries have developed strict controls of lead in cosmetics, but in many low- and middle-income countries, regulations to limit lead exposure either do not exist or lack enforcement. Discover how you can make a sustainable impact on addressing this issue.



Photo Credit: Majdi Fathi/NurPhoto/Getty Images

Funding Level Required  
**\$2,093,000**

**2025–2029**

Funding Still Needed  
**\$1,418,000**

## BACKGROUND

- 1 Pure Earth's Rapid Market Screening of consumer product samples in 25 countries found that **12% of cosmetics were lead contaminated** and exceeded the reference level of 2 parts per million (ppm). Further, lead was found in cosmetics in 21 out of 25 countries.
- 2 The two cosmetics with the highest lead concentrations were both **eyeliners** from Pakistan known as kajal or kohl, a cosmetic used for millenia in the Arab world and among Muslim communities for cultural, religious, medicinal and aesthetic purposes. Other samples with elevated lead levels included nail polish, lipstick, eyeshadow, face powder, mascara, liquid foundation/concealer, and hair products.
- 3 A recent representative blood lead level survey in Northern Ghana found high lead poisoning rates, with **contaminated eyeliner** ("Chilo") identified as a key exposure source. Some samples contained 100% lead, and most were imported from South Asia and beyond. In addition, face paint samples specifically intended for children were lead contaminated.
- 4 Of particular concern is the risk to children because the application of these eyeliners to infants is a common practice in Muslim communities, and has been linked with **childhood lead poisoning**.

Photo Credit: Healthline



## PROGRESS TO DATE

### 1 Source Analysis

- Over 350 cosmetic samples tested in 25 countries as part of the 2021-2023 Rapid Market Screening (RMS).
- Home Based Assessments in 6 countries revealed lead-contaminated cosmetics may be linked to elevated Blood Lead Levels (BLLs).
- Pure Earth researchers are surveying lead-contaminated kohl eyeliners sold in the U.S. via stores and online platforms (primarily eBay, Etsy, Amazon, and TikTok Shop).

### 2 Source-Specific Interventions

- Data from RMS and Home Based Assessments identified specific producers, concentrated in a few countries like Pakistan and India, linked to contamination. This information is being shared with partner organizations to drive regulatory action.
- Pure Earth will analyze the supply chain of chilo eyeliner in Ghana to trace the entry and spread of contaminated products.
- Pure Earth received funding for a randomized control trial in Northern Ghana to test 2 interventions replacing contaminated cosmetics and cookware with safe alternatives.

## THE WAY FORWARD: PROGRAM ACTIVITIES

Funding Needed: \$1,400,000

### 1 Source Analysis

- Complete a larger marketplace screening to verify preliminary data from previous studies.
- Conduct Home-Based Assessments, including isotopic analysis, to further understand the specific contribution of cosmetics (vs. other sources like cookware) to elevated BLLs.

### 2 Source-Specific Interventions

- Facilitate workshops for economic actors in cosmetics in Ghana.
- Engage industry with data on eyeliner contamination, supply chain analysis, production mapping, and technical solutions.

### 3 Communications

- Conduct community awareness activities related to contaminated cosmetics.

### 4 Institutional Strengthening

- Facilitate consumer item regulation workshops for government officials in Ghana.
- Review Ghanaian Standards Authority consumer product safety policies and regulations, map key stakeholders, and make recommendations for a new regulatory framework.
- Build the government's enforcement capacity to assess markets and supply chains while acquiring and maintaining necessary equipment, including XRFs.

## COST BENEFIT OF LEAD INTERVENTIONS



**Lead-Contaminated Cosmetics Intervention**

**\$380 per death avoided**

**\$9.23 per WELLBY\***

\*Source: Happier Lives Institute, 2024

Funding Level Required

**\$2,093,000**

Funding Raised

**\$675,000**

Funding Needed

**\$1,418,000**