The California Department of Public Health’s Lead in Candy Program:

History, Procedures, and Outcomes

July 6, 2017
CalEPA Headquarters
Sacramento, California
The Department shall regulate candy to ensure it is not adulterated.

Defined as a confectionary intended for individual consumption.

Contains chili, tamarind, or any other ingredient identified as posing a health risk.

Maximum lead level at 100 ppb (0.10 ppm)
(based on Consent Judgement maximum lead level People v. Alpro Alimento Proteinicos)

CDPH collects and analyzes candy samples; takes enforcement action when adulterated candies are identified.
Collection History

To date, CDPH has collected and tested over 5,600 samples

- **2007 - 2008:** Focus was entirely on candy manufactured in Mexico.

- **2009 - 2014:** Program was expanded to include candies manufactured in other countries and the USA.

- Candy samples come from:
  - Manufacturers
  - Distribution centers
  - Warehouses
  - Retail stores
Laboratory Analysis: CDPH Food & Drug Lab Branch

- Sampling: Lab mixes/divides to get 250g representative sample
- Pre-digestion: 10% nitric acid & steam bath homogenization
- Extraction:
  - 1 g equivalent sample
  - concentrated nitric acid + hydrogen peroxide
  - Microwave digestion
  - Collect digested samples, dilute if necessary
  - Analyze using ICP-MS
- Report validated results to CDPH Food & Drug Branch
- Current Limit of Quantitation = 50 ppb; can be lowered to 10 ppb
  (Method Detection Limit = 0.10 ppb)
Number of Recalls Issued for Adulterated Candies (2007 to present)

<table>
<thead>
<tr>
<th>Year</th>
<th>Numbers of recalls</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>9</td>
</tr>
<tr>
<td>2008</td>
<td>13</td>
</tr>
<tr>
<td>2009</td>
<td>6</td>
</tr>
<tr>
<td>2010</td>
<td>10</td>
</tr>
<tr>
<td>2011</td>
<td>12</td>
</tr>
<tr>
<td>2012</td>
<td>17</td>
</tr>
<tr>
<td>2013</td>
<td>5</td>
</tr>
</tbody>
</table>

*No recalls in 2014 - 2017*
Numbers of Recalled Candy Products by Country of Origin

<table>
<thead>
<tr>
<th>Country</th>
<th>Numbers of Recalls</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>24</td>
</tr>
<tr>
<td>Mexico</td>
<td>22</td>
</tr>
<tr>
<td>China</td>
<td>11</td>
</tr>
<tr>
<td>USA</td>
<td>3</td>
</tr>
<tr>
<td>Hong Kong/China</td>
<td>2</td>
</tr>
<tr>
<td>Malaysia</td>
<td>2</td>
</tr>
<tr>
<td>Pakistan</td>
<td>2</td>
</tr>
<tr>
<td>Taiwan</td>
<td>2</td>
</tr>
<tr>
<td>Australia</td>
<td>1</td>
</tr>
<tr>
<td>Japan</td>
<td>1</td>
</tr>
<tr>
<td>Turkey</td>
<td>1</td>
</tr>
<tr>
<td>Vietnam</td>
<td>1</td>
</tr>
</tbody>
</table>

Calculated Numbers of Recalled Candy Products by Country of Origin

- India: 24
- Mexico: 22
- China: 11
- USA: 3
- Hong Kong/China: 2
- Malaysia: 2
- Pakistan: 2
- Taiwan: 2
- Australia: 1
- Japan: 1
- Turkey: 1
- Vietnam: 1
Actions Taken When CDPH Finds Adulterated Candy

- Responsible firm is notified by CDPH field personnel
- Voluntary recall initiated by firm; CDPH issues Health Alert
- Embargo of same candy at the facility, if any on-hand
- Manufacturer / importer notified via formal letter:
  - Lead level in their particular product
  - The affected candy is illegal for sale / distribution in CA
  - Fee assessed to recover costs (sampling and analysis)
  - Product can be re-evaluated for subsequent sale in CA*

  (*Cannot occur until CDPH receives and approves root cause analysis + corrective actions implemented to prevent recurrence)
Examples of Candies Found to be Adulterated
High-level Conclusions

• CDPH has found candies since 2007 that have been deemed adulterated with lead above 100 ppb.

• Majority of adulterated candies are from foreign countries; some are from the US manufacturers.

• Some manufacturers are willing to try to address the issue and reduce lead content in their products.

• Detections of lead-contaminated candies have decreased since 2012, with no recalls 2014-present.
## Additional Information: CDPH Lead in Candy Web Page

[www.cdph.ca.gov/leadincandy](http://www.cdph.ca.gov/leadincandy)

### Laboratory Data
- Test Results 2017-2018
- Test Results 2015-2016
- Test Results 2013-2014
- Test Results 2011-2012
- Test Results 2009-2010
- Test Results 2007-2008
- Re-Test Results
- Historical Test Results

### Frequently Asked Questions
- Lead in Candy FAQ

### Regulations & Statutes
- AB 121 - Lead in Candy Bill
- Sherman Food, Drug, and Cosmetic Law

### Resources
- Office of Environmental Health Hazard Assessment
- Centers for Disease Control
- U.S. Food and Drug Administration
Additional Information:
CDPH Food and Drug Branch

fdbinfo@cdph.ca.gov

Phone: (800) 495-3232
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Thank-you!