

**Proposed Adoption of
New Chapter and Section
(Title 27, California Code of Regulations)**

Chapter 3: Naturally Occurring Lead in Candy
Section 28500: Naturally Occurring Levels of Lead in Candy

Public Hearing
Office of Environmental Health Hazard Assessment
Sacramento, California
May 8, 2019



OEHHHA

SCIENCE FOR A HEALTHY CALIFORNIA

Proposed Regulatory Text

OEHHA is proposing to add the following new chapter and section to Title 27, of the California Code of Regulations:

CHAPTER 3. NATURALLY OCCURRING LEAD IN CANDY **§ 28500. Naturally Occurring Levels of Lead in Candy**

For purposes of Health and Safety Code section 110552(c)(3), the following levels of lead in candy are deemed by the Office of Environmental Health Hazard Assessment to be naturally occurring:

Type of Candy	Naturally-Occurring Level (parts per million)
Candies flavored with chili and/or tamarind	0.02 ppm



Health and Safety Code §110552 (Adulterated Candy)

- HSC §110552(c)(2) defines “adulterated candy” as “candy with lead in excess of the naturally occurring level”
- HSC §110552(c)(3) requires that OEHHA, in consultation with the California Department of Public Health (CDPH) and the Attorney General’s Office (OAG), adopt regulations establishing “naturally occurring levels of lead in candy containing chili and tamarind”



Health and Safety Code §110552 (Adulterated Candy)

- HSC §110552 (c)(3) defines “naturally occurring lead” as lead that is:

Not avoidable by good practices (e.g., agricultural, manufacturing, and procurement practices, or other currently feasible practices)

Not from: agricultural equipment, fuels used on or around soils or crops, fertilizers, pesticides, materials applied to soils or crops, or materials added to water used to irrigate soils or crops

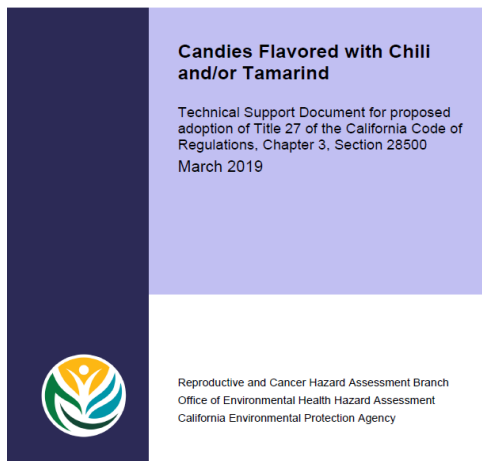


OEHHA Approach

- Details of the scientific approach and analysis supporting the proposed regulatory level are provided in the Technical Support Document:
 - *Naturally Occurring Lead in Certain Candies. Candies Flavored with Chili and/or Tamarind* (OEHHA 2019)



Naturally Occurring Lead in Certain Candies



OEHHA Approach: Overview

- Ingredient-based approach for candies flavored with chili and/or tamarind
 - Identify ingredients that may substantially contribute to naturally occurring lead in these candies
 - Evaluate the level of naturally occurring lead in these ingredients
 - Estimate the level of naturally occurring lead in these candies



Ingredients That May Substantially Contribute Naturally Occurring Lead

- Chili peppers and chili powder
- Tamarind
- Food-grade salt
- Sugar
- Food-grade silicon dioxide (SiO_2)
- Food-grade titanium dioxide (TiO_2)



Percent Ingredient in Selected Candy Formulations

Type of Candy	Chili Powder	Tamarind	Salt	Sugar	SiO ₂	TiO ₂
Sugar-based candies flavored with chili and/or tamarind	0 – 15	0 – 5	0 – 10	75 – 80	0.1 – 0.3	0.1
Tamarind-based candies with/without chili	0 – 17.5	80 – 100	0 – 2	0 – 20	0 – 0.4	0 – 0.1
Salt-based candies flavored with chili	5 – 30	0	50 – 60	0 – 20	0.1 – 0.6	0.1



Estimated Contribution of Naturally Occurring Lead by Ingredient

- Available data were reviewed to quantify naturally occurring lead in these ingredients.

Ingredient	Naturally occurring Lead in Ingredient (ppm)
Chili powder	0.01
Tamarind	0.02
Salt	0.02
Sugar	0.003
SiO ₂	0.05
TiO ₂	2.5

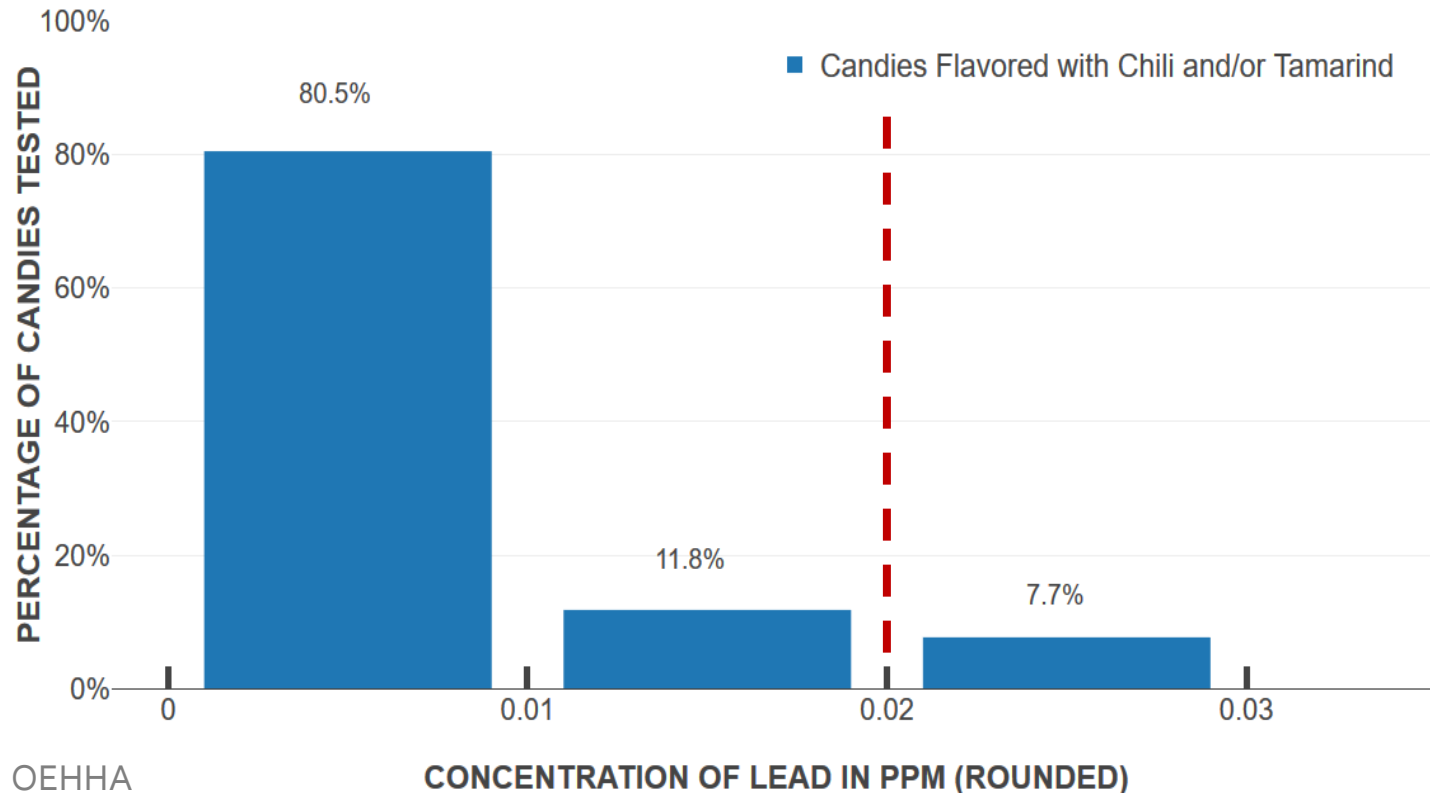


Estimated Naturally Occurring Lead in Candy by Formulation Type

% Ingredient in Selected Candy Formulations (Naturally Occurring Lead Contributed by Ingredient (in ppm))							Estimated Naturally Occurring Lead in the Candy (ppm)
Type of Candy	Chili Powder	Tamarind	Salt	Sugar	SiO ₂	TiO ₂	
Sugar-based candies flavored with chili and/or tamarind	14.6% (0.00146)	0% (0)	10% (0.002)	75% (0.00225)	0.3% (0.00015)	0.1% (0.0025)	up to 0.02
Tamarind-based candies with/without chili	0% (0)	100% (0.02)	0% (0)	0% (0)	0% (0)	0% (0)	
Salt-based candies flavored with chili	30% (0.003)	0% (0)	60% (0.012)	9.3% (0.000279)	0.6% (0.0003)	0.1% (0.0025)	

Distribution of Lead Concentrations in Candies Flavored with Chili and/or Tamarind (2012-2017)

- 195 samples of candies produced in Mexico by nine manufacturers



Proposed Regulatory Text

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Reminder: written public comments are due by 5 pm on May 22, 2019

The public is encouraged to submit written information through our website at <https://oehha.ca.gov/comments>.

