SENATE COMMITTEE ON ENVIRONMENTAL QUALITY
Senator Blakespear, Chair
2025 - 2026 Regular

Bill No:	SB 1033		
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Urgency:	No	**Fiscal:**	Yes
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SUBJECT: Protein products

DIGEST: This bill requires a manufacturer of a bulk or packaged protein product that is offered for sale in California to test products for heavy metals and a brand owner of a packaged protein product that is offered for sale in California to disclose product information, including heavy metal testing results, to the public commencing January 1, 2028.

ANALYSIS:

Existing federal law:

1) Establishes, through the U.S. Food and Drug Administration (FDA), various requirements for food labels under the Federal Food, Drug, and Cosmetic Act (FD&C Act), which includes the Nutritional Labeling and Education Act and the Food Allergen Labeling and Consumer Protection Act. These include requiring specified nutrition information, a listing of all ingredients, and whether a product contains any of eight major food allergens, such as milk, eggs, shellfish, tree nuts, etc. (21 United States Code (USC) § 301, et seq. and 21 Code of Federal Regulations (CFR) § 101, et seq.)

2) Defines "dietary supplement" as a product intended to supplement the diet that bears or contains one or more of the following dietary ingredients: a vitamin; a mineral; an herb or other botanical; an amino acid; a dietary substance to supplement the diet by increasing the total dietary intake; or, a concentrate, metabolite, constituent, extract, or combination of any of these ingredients. Excludes from this definition something that is represented for use as a conventional food or as a sole item of a meal or diet. (21 USC § 321(ff))

Existing state law:

1) Establishes the state Sherman Food, Drug, and Cosmetics Law (Sherman Law), administered by the California Department of Public Health (CDPH), which

regulates the manufacture, packaging, labeling, and advertising of food, drugs, and cosmetics. (Health and Safety Code (HSC) § 109875-111929.4)

2) Authorizes the establishment of a tolerance, regulatory limit, or action level for an added poisonous or deleterious substance in food, as specified. (21 CFR § 109.4)

3) Requires, beginning January 1, 2027, a brand owner of a packaged prenatal multivitamin product to disclose information on the results of the testing for heavy metals, and to include on the packaging a web address where people can get information on the heavy metal testing. (HSC § 110424.2)

4) Requires a manufacturer of baby food for sale or distribution in this state to test a representative sample of each production aggregate of the manufacturer's final baby food product, at least once per month, at a proficient laboratory, for arsenic, cadmium, lead, and mercury. (HSC § 110962(b)(1))

5) Requires a manufacturer of baby food for sale or distribution in this state to disclose product information for baby food sold, including making publicly available on the manufacturer's website the name and level of each toxic element present in a final baby food product. (HSC § 110962(b)(2))

6) Requires, if a baby food product is tested for a certain toxic element subject to an action level, regulatory limit, or tolerance established by the federal Food and Drug Administration (FDA), to include a Quick Response (QR) code that links to a page on the manufacturer's website that contains test results for the toxic element and a link to an FDA website where consumers can find the most recent FDA guidance and information about the health effects of the toxic element on children. (HSC § 110962(b)(B))

7) Prohibits, under the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65), a person in the course of doing business from knowingly and intentionally exposing any individual to a chemical known to the state to cause cancer or reproductive toxicity without first giving clear and reasonable warning to such individual. (HSC § 25249.6)

8) Authorizes, under Proposition 65, a warning to be provided by general methods, such as labels on consumer products, posting of notices, placing notices in public news media, and the like, provided that the warning is clear and reasonable; provides that regulations implementing Proposition 65 shall, to the extent practicable, place the obligation to provide any warning materials on the producer or packager rather than on the retail seller, except where the retail seller itself is responsible for introducing a chemical known to the state to

cause cancer or reproductive toxicity. (HSC § 25249.11(f))

This bill:

1) Requires, commencing January 1, 2028, a manufacturer of a bulk protein product or a packaged protein product that is sold, manufactured, delivered, held, or offered for sale to test a representative sample of each lot of the products for heavy metals at a proficient laboratory.

2) Requires a proficient laboratory that analyzes the products for heavy metals to meet specified criteria.

3) Requires manufacturers and brand owners to provide test results to the California Department of Public Health (CDPH) upon their request.

4) Requires, commencing January 1, 2028, a brand owner of a packaged protein product that is sold, manufactured, delivered, held, or offered for sale in the state, including products sold by a retailer or directly to consumers, to disclose product information to the public that is consistent with all of the following:

    a) Making publicly available on the brand owner's internet website the name and level of each heavy metal present in each lot of a product, information from the supplement facts panel, and the statement, "Protein products that are used to supplement protein intake may contain trace levels of heavy metals based on how the ingredients are sourced;"

    b) Making testing information available without the public providing a UPC or lot number, or proof of purchase;

    c) Providing specified information to enable accurate identification of the product on its internet website;

    d) Providing a hyperlink to the U.S. FDA website relating to heavy metals in food; and

    e) Including statements for consumers to find information on heavy metal testing and the website or hyperlink on the brand owner's website describing the product, the outermost package of the product, and a website where the product is sold.

5) Prohibits, commencing January 1, 2028, a person from selling, manufacturing, delivering, holding, or offering for sale in the state a protein product that does not comply with the proposed provisions.

6) Defines "protein product" as a dietary supplement or a protein supplement-based food product, in powdered, liquid, or solid form, containing a protein concentrate or protein isolate or a blend of protein concentrates or protein isolates, as specified, and contains at least five grams of protein per serving.

Background

1) *FDA regulation of dietary supplements.* Under the FD&C Act, as amended in 1994 by the Dietary Supplement Health and Education Act (often referred to as DSHEA), the FDA does not have the authority to approve dietary supplements for safety and effectiveness, or to approve their labeling, before the supplements are sold to the public. Instead, dietary supplements are regulated by the FDA in much the same manner as food, which means they are subject to requirements relating to good manufacturing practices, and must meet certain labeling standards, among other requirements. According to the FDA, it is the responsibility of dietary supplement companies to ensure their products meet the safety standards for dietary supplements and are not otherwise in violation of the law.

   Dietary supplement labels are required to have nutrition information in the form of a Supplement Facts label that includes the serving size, the number of servings per container, a listing of all dietary ingredients in the product, and the amount per serving of those ingredients. They also must have a statement on the front of the product identifying it as a "dietary supplement" or similar descriptive term (e.g., "herbal supplement" or "calcium supplement").

2) *How do toxic elements end up in supplements?* According to the FDA, arsenic, lead, cadmium and mercury may occur in the environment naturally (as elements in the earth's crust) and from human activities that result in pollution.[1] The amounts of these elements in the air, water, and soil can vary depending on natural geographical proximity to past or current pollution. The amount of arsenic, lead, cadmium, or mercury in certain foods depends on the amount in the environment and how much plants or animals 'take up' from the environment.

   For protein supplements specifically, many products rely on soy and pea protein as main ingredients, as soy is one of the most popular plant-based protein and pea protein is an alternative that has emerged because of its flavor profile and relatively low allergenicity. Much of the pea protein used in U.S

[1] U.S. Food and Drug Administration. (2025). Closer to Zero: Reducing Childhood Exposure to Contaminants from Foods.

food production is imported from China, according to the U.S. International Trade Commission.[2] These plants, like many plants, have a natural tendency to take up lead.

Contamination may also enter the products in the manufacturing process, as ingredients are dehulled and grounded, or when mixed with contaminated water. For animal-based protein products, the primary sources of heavy metal contamination in the cow's environment include the feed, water, and soil.[2]

3) *Proposition 65*. The Safe Drinking Water and Toxic Enforcement Act, commonly referred to as Proposition 65 (Prop 65), was a ballot measure passed by California voters in 1986 to address their concern that "hazardous chemicals pose a serious potential threat to their health and well-being, [and] that state government agencies have failed to provide them with adequate protection..." Prop 65 requires the state to publish a list of chemicals known to cause cancer or reproductive toxicity. This list, which must be updated at least once a year, currently includes approximately 900 chemicals.

   The Office of Environmental Health Hazard Assessment (OEHHA) administers the Prop 65 program, including evaluating all currently available scientific information on substances considered for placement on the list. Under Prop 65, businesses in California are required to provide a "clear and reasonable" warning before knowingly and intentionally exposing anyone to a Proposition 65-listed chemical. Once a chemical is listed, businesses have 12 months to comply with warning requirements. There are some exemptions from the warning requirement, including if the exposures they cause are so low as to create no significant risk of cancer or birth defects or other reproductive harm.

   The California Attorney General's Office enforces Prop 65. Any district attorney or city attorney (for cities whose population exceeds 750,000) may also enforce Prop 65. In addition, any individual acting in the public interest may enforce Prop 65 by filing a lawsuit against a business alleged to be in violation of this law. Penalties for violating Prop 65 by failing to provide warning notices can be as high as $2,500 per violation per day.

4) *Prop 65 safe harbor levels.* For many of the listed chemicals under Prop 65, OEHHA has determined "safe harbor" levels, meaning that if the exposure is below this level, business do not have to provide a Prop 65 warning. For chemicals that have been listed for causing cancer, the safe harbor level is labeled as "No Significant Risk Level (NSRL)," while the safe harbor level for

[2] Martineau, P. (2025). Protein Powders and Shakes Contain High Levels of Lead.

chemicals listed for reproductive toxicity is known as the Maximum Allowable Dose Level (MADL). For oral consumption, the most stringent safe harbor levels for arsenic, cadmium, and lead are 10, 4.1, and 0.5 micrograms per day, respectively.

5) *The problem with protein products.* Protein supplements are marketed for various uses, including muscle building, weight loss, and meal replacements. They may come in the form of ready to drink liquids and dry powders that are mixed with liquids before consumption. For some consumers, protein supplements are a part of their daily routine. There have been concerns regarding the safety of protein supplements due to the reported presence of heavy metals including arsenic, cadmium, mercury, and lead.[3] Significant consumption of these heavy metals have been associated with adverse health effects, including carcinogenesis, neurotoxicity, nephrotoxicity, and reproductive issues. Repeated or continuous exposure is considered the most hazardous regarding the consumption of protein products with contamination that exceeds certain thresholds. While sensitive populations, such as pregnant people and children, may be at risk of adverse neurological and behavioral impacts, chronic exposure would put the general adult population at risk of immune suppression, reproductive problems, kidney damage, and high blood pressure.[2]

   An analysis conducted in 2010 by Consumer Reports tested 15 protein drinks and found that contaminant levels in a few products exceeded maximum limits established by U.S. Pharmacopeia, a private, non-profit scientific organization, which are less stringent than the Prop 65 safe harbor levels, if three servings per day were consumed.[4] The analysis also revealed that over half of the products tested would have required a Prop 65 label. In 2018, the Clean Label Project tested 133 protein powder supplements and found that over 70% of the products contained "measurable levels" of lead and cadmium.[5]

   Despite the detection of heavy metals in protein products, the presence of heavy metals does not necessarily indicate a risk, as toxicity depends on various factors, including the frequency of dietary intake and biological mechanisms in response to toxicity.[3,6] A human health risk assessment conducted in 2020 based on the data used in the 2010 Consumer Reports and 2018 Clean Label Project studies suggested that the consumption of protein

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[3] Bandara, S., et. al. (2020). A human health risk assessment of heavy metal ingestion among consumers of protein powder supplements.
[4] Consumer Reports. (2010). Investigation: Tests Reveal Contaminants in Many Protein Drinks.
[5] Clean Label Project. (2018). Protein Powder White Paper.
[6] U.S. Environmental Protection Agency. (1993). Reference Dose (RfD): Description and Use in Health Risk Assessments.

powder supplements contaminated with heavy metals is not associated with an increased risk of non-carcinogenic health effects.[3]

Since that assessment, Consumer Reports has conducted a more recent analysis of protein products that has demonstrated higher levels of contamination than previously reported. Beginning in November 2024, Consumer Reports tested 23 bestselling products that ranged from dairy-, beef-, and plant-based protein supplements, including powders and shakes.[2] In their study, lead was the main heavy metal that emerged as an issue, and a few products exceeded their level of concern. for cadmium and arsenic. Consumer Reports maintained the Prop 65 safe harbor level for lead as their level of concern (with caveats) and more than two-thirds of the 23 products they analyzed contained more lead than it is safe to consume in one day. Some products contained ten times the amount of lead compared to their level of concern. The lead levels in plant-based protein products were, on average, nine times the amount found in those made with dairy-based products. The study recommended avoiding certain products that exceeded their level of concern for lead by over 1000%, and limiting daily or weekly consumption of other products with lower amounts of lead, even if the products still exceeded their level of concern.

This bill requires manufacturers of protein products to test their products for arsenic, cadmium, lead, and mercury, and further disclose the test results and other specified information to increase transparency

6) *This looks familiar…* This bill is largely modeled after AB 899 (Muratsuchi, Chapter 668, Statutes of 2023) and SB 646 (Weber Pierson, Chapter 602, Statutes of 2025), which required similar testing and disclosure of heavy metals in baby food and prenatal vitamins. Differences in the bills account for differences in manufacturing practices, the targeted consumers, and the implications for interpretation of the information disclosed. For example, the requirements for prenatal vitamins include a disclosure statement that demonstrates the nuance of consuming certain ingredients that may contain relatively more contamination, yet are relatively more essential to the development of a fetus. Unlike SB 1033, AB 899 and SB 646 also aimed to protect consumers that would be more sensitive to heavy metal exposure including young children and pregnant people. Nevertheless, testing and disclosure of protein products may still serve an important role, as these products may be consumed at higher frequencies or completely replace meals, despite experts suggesting that they are unnecessary for most people.[2]

Comments

1) *Purpose of Bill.* According to the author, "The sale of protein products, marketed as health and nutrition supplements, have skyrocketed in California. Investigations have found that several of these protein products contain unsafe levels of heavy metals for prolonged use, including arsenic, cadmium, and lead. Consumers deserve to know what they are putting into their bodies, and right now there's a troubling lack of transparency when it comes to toxic heavy metals. California has already enacted laws that regulate contaminants in menstrual products, prenatal vitamins, baby food, and cosmetics. This bill will require manufacturers to test their protein products for heavy metals, make those results publicly available, and prohibit the sale of products that fail to comply thus ensuring informed consumer choice. SB 1033 addresses a growing public health concern, protects Californians from preventable harm, and reinforces the state's commitment to transparency, safety, and responsible product regulation."

2) *The burdens of testing.* Opponents of the bill have noted that the testing and disclosure requirements are extensive and costly. This bill may be less costly for companies that are routinely conducting heavy metal testing for quality assurance, as those companies would only need to disclose their results. However, not all companies may participate in this practice, so others may incur additional costs. In particular, smaller and mid-sized companies, which groups have indicated are a large part of the market, may not be able to absorb certain costs, which may lead to their withdrawal from the market and consolidation that favors large multinational corporations. There may be worthy considerations here that account for the size of a company and the frequency, routine, or deadline at which they should test and disclose information on heavy metals.

3) *Public perception*. Manufacturers and groups opposed to this measure fear that by disclosing decontextualized testing data to the general public, misinterpretation and confusion around product safety might arise, even if the product is beneficial to the consumer. More information to contextualize the data, including additional details on contamination sources and frequency of exposure, could be provided along with the testing results. The bill includes a hyperlink to the FDA's website on heavy metals in food, which may provide a resource for context, but further information may be considered.

   Increased transparency, for those who seek it, will allow consumers to be able to make a choice between products. There is an incentive for manufacturers to ensure that their product has lower amounts of contamination, as studies have

shown that certain products may contain heavy metals in amounts that are 10 to 100 times the amount in comparable products. It could be argued that the outcomes of this bill would not be worse than the status quo, in which consumers may blindly purchase highly contaminated products, while manufacturers may continue to operate business as usual.

Related/Prior Legislation

SB 646 (Weber Pierson, Chapter 602, Statutes of 2025) required manufacturers of prenatal multivitamin products to test samples of the vitamins for arsenic, cadmium, lead, and mercury, and requires the brand owner of a multivitamin product to disclose the testing results and other information to the public.

SB 754 (Durazo, Chapter 604, Statutes of 2025) required manufacturers of disposable tampon or pad products to maintain information regarding the concentrations of specified chemicals beginning December 31, 2026, and requires the Department of Toxic Substances Control (DTSC) to conduct relevant oversight.

AB 899 (Muratsuchi, Chapter 668, Statutes of 2023) required manufacturers of baby food to test a representative sample of final products for arsenic, cadmium, lead, and mercury, as specified, and to disclose information to consumers about the levels of these toxic elements present in each final product.

AB 1178 (Quirk of 2019) would have required a manufacturer or distributor of dietary supplements that contain live microorganisms, to include the genus, species, and strain of each live microorganism in the dietary supplement on the label of the dietary supplement. *AB 1178 was held on the Senate Appropriations Committee suspense file.*

AB 1316 (Quirk and Cristina Garcia, Chapter 507, Statutes of 2017) required CDPH to revise its regulations for the Childhood Lead Poisoning Prevention Program to redefine the assessment of risks for the purposes of evaluating a child's risk for lead exposure.

AB 688 (Pan, Chapter 681, Statutes of 2011), among other things, prohibited a retail food facility from selling or offering for sale after the “use by” date infant formula or baby food that is required to have this date on its packaging pursuant to federal law.

SOURCE: Consumer Reports
Environmental Working Group

SUPPORT:

A Voice for Choice Advocacy
American College of Obstetricians & Gynecologists - District Ix
Breast Cancer Prevention Partners
California Health Coalition Advocacy
California Nurses for Environmental Health & Justice
Center for Environmental Health
Clean Earth 4 Kids
Clean Label Project
Consumer Reports
Environmental Working Group
Facts Families Advocating for Chemical and Toxics Safety
Psr Sf Bay Chapter
Ritual
Unleaded Kids

OPPOSITION:

American Herbal Products Association
Dairy Institute of California
Natural Products Association (UNREG)
California League of Food Producers
Consumer Brands Association

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