
SENATE COMMITTEE ON ENVIRONMENTAL QUALITY

Senator Blakespear, Chair

2025 - 2026 Regular

Bill No: AB 1604
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Version: 5/18/2026
Urgency: No
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Hearing Date: 6/17/2026
Fiscal: Yes

SUBJECT: Product safety: proofs of purchase: intentionally added bisphenols

DIGEST: This bill prohibits the provision or manufacture of a paper proof of purchase (receipt) containing intentionally added bisphenol A (BPA), on or after January 1, 2028, or containing any intentionally added bisphenol, on or after January 1, 2029.

ANALYSIS:

Existing law:

- 1) Defines “bisphenol” as a chemical with two phenol rings connected by a single linker atom. (HSC § 108942(a))
- 2) Prohibits, through SB 1266 (Limón, Chapter 790, Statutes of 2024), the manufacture or sale of any juvenile’s feeding, sucking, or teething product that contains any form of bisphenol above the practical quantitation limit determined by DTSC on or after January 1, 2026. (HSC § 108940 (a))
- 3) Requires a manufacturer to use the least toxic alternative when replacing any form of bisphenol in a juvenile’s feeding product or juvenile’s sucking or teething product and prohibits a manufacturer from replacing any form of bisphenol pursuant to these provisions with chemicals known to cause cancer or reproductive harm, or with any chemical identified by DTSC as a Candidate Chemical through its Safer Consumer Products Program. (SB 1266 (Limón); HSC § 108941)
- 4) Establishes, through SB 1379 (Perata, Chapter 599, Statutes of 2006), the California Environmental Contaminant Biomonitoring Program which:
 - a) Requires the California Department of Public Health (CDPH), in collaboration with the California Environmental Protection Agency, to utilize biological specimens, as appropriate, to identify designated chemicals that are present in the bodies of Californians;

- b) Defines "designated chemicals" as those chemicals that are known to, or strongly suspected of, adversely impacting human health or development, based upon scientific, peer-reviewed animal, human, or in vitro studies, and according to certain parameters;
 - c) Includes bisphenol in the list of designated chemicals. (HSC §§ 105440, 105441)
- 5) Under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):
- a) Prohibits 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;
 - b) Requires the Governor to publish a list of chemicals known to the state to cause cancer or reproductive toxicity and to revise and republish the list in light of additional knowledge at least once per year;
 - c) Includes BPA and bisphenol S (BPS) in the list of chemicals known to the state to cause birth defects and/or other reproductive harm. (HSC §§ 25249.6, 25249.8)
- 6) Establishes the Safer Consumer Products Program which requires DTSC to adopt regulations to establish a process to identify and prioritize chemicals or chemical ingredients in consumer products that may be considered chemicals of concern, as specified. (HSC § 25252)

This bill:

- 1) Makes legislative findings and declarations about paper receipts and bisphenols.
- 2) Defines the following:
 - a) "bisphenol" as a chemical with two phenol rings connected by a single linker atom. Specifies that the linker atom and phenol rings may have additional substituents;
 - b) "business" as a person that accepts payment through cash, credit, or debit transactions. Exempts from the definition of business the following:

- i) A health care provider, as defined in Health and Safety Code (HSC); and,
 - ii) An entity organized as a nonprofit institution that has annual gross sales receipts of less than \$2,000,000.
- c) “consumer” as a person who purchases, and does not offer for resale, food, alcohol, other tangible personal property, or services;
 - d) "intentionally added bisphenols" as bisphenols that a manufacturer has intentionally added to a product and that have a functional or technical effect in the product, including bisphenols that are intentional breakdown products of an added chemical that also have a functional or technical effect in the product;
 - e) “intentionally added bisphenol A” as above for BPA (CAS no. 80-05-7);
 - f) "manufacturer" as the person that makes the paper for the paper receipt using raw materials, machinery, or both;
 - g) "proof of purchase" as a receipt for the retail sale of food, alcohol, or other tangible personal property, or for the provision of services, provided at the point of sale;
- 3) Prohibits a person from manufacturing, distributing, selling, or offering for sale a receipt which contains:
 - a) intentionally added BPA, on and after January 1, 2028; or
 - b) any intentionally added bisphenols, on and after January 1, 2029.
 - 4) Authorizes DTSC to adopt regulations to implement this bill.
 - 5) Requires DTSC:
 - a) to post any violation or enforcement action of the provisions of this bill on its internet website.
 - b) to deposit all penalties collected pursuant to the provisions of this bill into the Toxic Substances Control Account for use to enforce the provisions of this bill.
 - 6) Authorizes DTSC, the Attorney General, a district attorney, a county counsel, or a city attorney to enforce the provisions of this bill:

- a) Provides that a violation of the provisions of this bill shall be punishable by a civil penalty not to exceed \$5,000 for a first violation and not to exceed \$10,000 for each subsequent violation.
 - b) Provides that a prevailing plaintiff who establishes a violation of the provisions of this bill shall be entitled to an award of reasonable attorney's fees and costs.
- 7) Requires manufacturers to use the least toxic alternative when replacing bisphenol in a paper receipt and prohibits any alternative which is:
- a) Classified by the US EPA as carcinogenic, likely to be carcinogenic in humans, or has suggestive evidence that it is carcinogenic in humans;
 - b) Identified by the state, pursuant to Proposition 65, to cause cancer or cause reproductive harm;
 - c) On the Safer Consumer Products candidate chemicals list.

Background

- 1) *What are bisphenols?* Bisphenols are a group of synthetic chemicals that are used in the manufacturing of polycarbonate plastics and epoxy resins.¹ The most widely used and well-studied chemical in the group is BPA, but the use of other bisphenols, such as BPS and bisphenol F (BPF), is increasing as manufacturers use these chemicals to replace BPA, especially following restrictions on the use of BPA.²

The Human Biomonitoring for Europe program (HBM4EU), a joint European human biomonitoring initiative, explains in its "Bisphenols: What You Need to Know" factsheet that BPA is used as a building block in the production of polycarbonate plastics.³ The resulting plastic is clear and tough and used to manufacture a wide range of consumer goods, including sports equipment, impact-resistant safety equipment, automobile parts, and food containers, such as reusable beverage bottles and reusable plastic tableware.⁴

¹ Mayo Clinic (2023) *What is BPA? Should I be worried about it?* <https://www.mayoclinic.org/healthy-lifestyle/nutrition-and-healthy-eating/expert-answers/bpa/faq-20058331>

² Jaskulak, M. & Zorena, K. (2025) Quantifying the metabolic health burden of increased BPA/BPF/BPS endocrine-disrupting chemical exposure: A temporal and cross-country comparative analysis from 2000 to 2024, *Science of the Total Environment*. <https://www.sciencedirect.com/science/article/pii/S0048969725025379>

³ HBM4EU, *Bisphenols*. <https://www.hbm4eu.eu/hbm4eu-substances/bisphenols/>

⁴ New York State Department of Health, *Bisphenol A*. https://www.health.ny.gov/environmental/chemicals/bisphenol_a/

Another primary use of BPA is in the production of epoxy resins used to line food and beverage cans to avoid corrosion of the metal and to avoid migration of metals into the can's contents. Epoxy resins are also used to line water pipes and in the manufacture of thermal papers used for shop sales receipts, ATM receipts, public transport tickets, parking tickets, and airline boarding passes. Finally, BPA is used in dental sealants. In terms of other bisphenols, both BPS and BPF are also used in the manufacture of plastics. Also, BPS is increasingly used in the production of thermal papers.⁵

- 2) *Health impacts of bisphenols.* BPA classified as an endocrine disruptor, meaning it adversely impacts the hormonal systems in humans.⁶ BPA is linked to several adverse effects including neurological,⁷ immunological,⁸ cardiovascular effects.⁹ Additionally, BPA is associated with increased cancer risk, low birth weight, and infertility.¹⁰

BPA largely enters the body through food, leeching into food from plastic food containers. Since BPA is so common in plastic and plastic-coated products, BPA was found in 92% of people. Food or drinks may contain very low levels of BPA that have migrated from containers and linings; however, BPA toxicity occurs on low doses.¹⁰ Small children have an increased risk of becoming exposed to BPA due to their higher food consumption compared to their size.

Widespread health concerns over BPA lead to the compound being removed from many consumer products. However, BPS is a common BPA replacement which is less well-studied and potentially just as hazardous.² A 2020 Nature literature review, titled “Bisphenol S in Food Causes Hormonal and Obesogenic Effects Comparable to or Worse than Bisphenol A: A Literature Review,” states the following:

“In recent years, bisphenol analogues such as bisphenol S (BPS) have come to replace bisphenol A in food packaging and food containers, since bisphenol A (BPA) has been shown to leach into food and water, causing numerous negative health effects. Unfortunately, little or no research was

⁵ Bernier, M. R. & Vandenberg, L. N. (2017) *Handling of thermal paper: Implications for dermal exposure to bisphenol A and its alternatives*, PLoS One. <https://pmc.ncbi.nlm.nih.gov/articles/PMC5453537/>

⁶ Ma, Y., et al. (2019) *The adverse health effects of bisphenol A and related toxicity mechanisms*, Environmental Research. <https://www.sciencedirect.com/science/article/abs/pii/S001393511930372X>

⁷ Costa, H. E. & Cairrao, E. (2023) *Effect of bisphenol A on the neurological system: a review update*, Archives of Toxicology. <https://pubmed.ncbi.nlm.nih.gov/37855918/>

⁸ Zhang, Q., et al. (2024) *Integrated analysis reveals the immunotoxicity mechanism of BPs on human lymphocytes*, Chemo-Biological Interactions. <https://www.sciencedirect.com/science/article/abs/pii/S0009279724002941>

⁹ Fonseca, M. I., et al. (2022) *Endocrine-Disrupting Effects of Bisphenol A on the Cardiovascular System: A Review*, Journal of Xenobiotics. <https://pmc.ncbi.nlm.nih.gov/articles/PMC9326625/>

¹⁰ European Environment Agency (2023) *Human Exposure to Bisphenol A in Europe*. <https://www.eea.europa.eu/en/analysis/publications/human-exposure-to-bisphenol-a>

done to determine the safety of these BPA-free products before they were marketed to the public as a healthier alternative. The latest studies have shown that some of these bisphenol analogues may be even more harmful than the original BPA in some situations... It was found that BPS works via different pathways than does BPA [...] and that BPS was correlated with metabolic disorders, such as gestational diabetes, that BPA was not correlated with. BPS was also shown to be more toxic to the reproductive system than BPA and was shown to hormonally promote certain breast cancers at the same rate as BPA. Therefore, a strong argument may be made to regulate BPS in exactly the same manner as BPA.”¹¹

Under Proposition 65, OEHHA listed BPA for effects on the female reproductive system in 2015 and for developmental effects in 2020.¹² On December 29, 2023, OEHHA placed BPS on the Proposition 65 list for reproductive toxicity based on the female reproductive endpoint, and on January 3, 2025, it added the male reproductive toxicity endpoint.¹³ However, there are other bisphenols which are not yet on the Prop 65 list.¹⁴ Bisphenol as a chemical group is on the Safer Consumer Product’s Candidate Chemical List.¹⁵

- 3) *Show me the receipts.* Most receipts are made of thermal paper, which is coated with layers of chemicals that allow for rapid image formation. Though most people are exposed to bisphenols from food packaging, people may also be exposed to BPA through the skin by handling thermal papers, such as register receipts.¹⁶ Retail workers, predominantly younger women and lower-income people, have 30 percent more BPA in their bodies than other adults.^{17,18} Alternatives to bisphenol thermal paper exist. A 2023 study found that Bisphenol-based receipts have decreased from about 93% of receipts in 2017 to

¹¹ Thoene, M., et al. (2020) *Bisphenol S in Food Causes Hormonal and Obesogenic Effects Comparable to or Worse than Bisphenol A: A Literature Review*, Nutrients. <https://pmc.ncbi.nlm.nih.gov/articles/PMC7071457/>

¹² Proposition 65, Bisphenol A (BPA) Fact Sheet. <https://www.p65warnings.ca.gov/fact-sheets/bisphenol-bpa>
¹³ <https://oehha.ca.gov/proposition-65/chemicals/bisphenol-s-bps>

¹⁴ OEHHA, *Chemicals Considered or Listed under Proposition 65: Bisphenol S (BPS)*
<https://www.p65warnings.ca.gov/fact-sheets/tetrabromobisphenol-tbbpa>

¹⁵ DTSC, *Candidate Chemicals*. <https://dtsc.ca.gov/scp/candidate-chemicals-list/>

¹⁶ Schwartz, A. W. & Landrigan P. J. (2012) *Bisphenol A in Thermal Paper Receipts: An Opportunity for Evidence-Based Prevention*, Environmental Health Perspectives. <https://pmc.ncbi.nlm.nih.gov/articles/PMC3261950>

¹⁷ EWG (2010) *BPA Coats Cash Register Receipts*. <https://www.ewg.org/research/bpa-coats-cash-register-receipts>

¹⁸ Ndaw, S., et al. (2016) *Occupational exposure of cashiers to Bisphenol A via thermal paper: urinary biomonitoring study*, International Archive of Occupational and Environmental Health. <https://pmc.ncbi.nlm.nih.gov/articles/PMC4927604/>

86% in 2022. Non-bisphenols increased from 5% to 14% of receipts.¹⁹ Starting this year, Washington State banned bisphenols from all thermal paper.²⁰

However, the compounds used in non-bisphenol thermal paper are not well studied. Pergafast 201 is one such alternative used bisphenol-free thermal paper and is already found in 12% of receipts.¹⁴ Of the limited studies available on Pergafast, a 2026 paper found that Pergafast is less able to be absorbed through the skin but may remain in the body for longer.²¹ The Washington State Department of Ecology concluded that Pergafast and e-receipts are safer alternatives to bisphenols in thermal paper.²² Another alternative NKK-1304 was first reported in a medical journal in 2023.¹⁴ Other alternatives, include minimizing the use of thermal paper or eliminating it entirely. For example, businesses may allow the consumer to receive a digital receipt or skip a receipt entirely.

- 4) *Chemical classes and regrettable substitutions.* As with BPS becoming a common yet harmful substitution for BPA, regulating chemicals one at a time can lead to regrettable substitutions where the new chemical is less well-studied and potentially as, if not more, harmful compared to the original chemical. In 2016, OEHHA scientists published the article, "Identifying Chemical Groups for Biomonitoring," in the journal *Environmental Health Perspectives*, which states:

“Regulatory agencies face daunting challenges identifying emerging chemical hazards because of the large number of chemicals in commerce and limited data on exposure and toxicology. Evaluating one chemical at a time is inefficient and can lead to replacement with uncharacterized chemicals or chemicals with structural features already linked to toxicity... Evaluating chemical groups, rather than individual chemicals, is an efficient way to respond to shifts in chemical use and the emergence of new chemicals. This strategy can enable earlier identification of important chemicals for monitoring and intervention.”²³

¹⁹ Miller, G. Z., et al. (2023) *Bisphenols and alternative developers in thermal paper receipts from the U.S. market assessed by Fourier transform infrared spectroscopy*, Environmental Pollution.
<https://pubmed.ncbi.nlm.nih.gov/37481030/>

²⁰ Ecology Center (2026) *Washington state's first-in-the-nation ban on toxic bisphenols in receipts takes effect*.
<https://www.ecocenter.org/washington-states-first-nation-ban-toxic-bisphenols-receipts-takes-effect>

²¹ Tyskhotska, O., et al. (2026) *Assessment of Pergafast 201 absorption and metabolism in viable human skin: A comparative study with bisphenol A and bisphenol S*, Environment International.
<https://www.sciencedirect.com/science/article/pii/S0160412026001492>

²² Washington Department of Ecology (2022) *Regulatory Determinations Report to the Legislature: Safer Products for Washington Cycle 1 Implementation Phase 3*, Publication 22-04-018.
<https://apps.ecology.wa.gov/publications/documents/2204018.pdf>

²³ Krowech, G., et al. (2016) *Identifying Chemical Groups for Biomonitoring*, Environmental Health Perspectives.
<https://pmc.ncbi.nlm.nih.gov/articles/PMC5132641/>

Regulating chemicals as a class, rather than one at a time, allows agencies to prioritize public health by minimizing substitutions with little safety data, extrapolating data from well-studied chemicals to less well-studied substitutions, taking into account cumulative health impacts, and greater regulatory efficiency.²⁴

Previous legislation has regulated bisphenols and per- and polyfluoroalkyl substances (PFAS) chemicals as a class, rather than as individual chemicals, including SB 1266 (Limon) which bans bisphenols in children's teething toys and AB 2515 (Papan, Chapter 1008, Statutes of 2024) which bans PFAS, as a chemical class, in menstrual products.

Comments

- 1) *Purpose of Bill.* According to the author, "AB 1604 will better protect public health and the environment in California by eliminating harmful bisphenol chemicals from paper receipts. Beginning January 1, 2028, manufacturers and businesses will no longer be allowed to use BPA in receipts, with a full phase-out of all bisphenol chemicals by January 1, 2029. These chemicals have been linked to detrimental health issues for women and children, which are known to cause reproductive, developmental, and behavioral harm. By removing bisphenols from receipts, this legislation helps reduce daily exposure to toxic substances and prevents contamination in recycling and composting systems – prioritizing health, safety, and environmental responsibility for all Californians."
- 2) *Protecting cashier health.* AB 1604 takes a strong approach to protecting the health of cashiers who are currently exposed to bisphenols at their workplace. By prohibiting bisphenols as a chemical class in receipts, AB 1604 avoids a piecemeal approach which would have allowed other bisphenols to replace the commonly used BPA. Additionally, AB 1604 includes language precluding other harmful substitutes, such as chemicals identified either by the federal or the state government as being carcinogenic or endocrine disrupting.

While it may prove burdensome for manufacturers or retailers to replace existing thermal paper with safer alternatives, AB 1604 provides until 2028 to replace BPA and until 2029 to replace any intentionally added bisphenol. For retailers, this provides 2 to 3 years to use existing stock and replace that stock with an alternative. For manufacturers, many have already begun to phase out

²⁴ Maffini, M. V., et al. (2023) *Advancing the science on chemical classes*, Environmental Health <https://link.springer.com/article/10.1186/s12940-022-00919-y>

BPA and have additional time to phase out other bisphenols. Retailers and manufacturers elsewhere have already have to comply with BPA and bisphenol receipt bans: Washington State has already banned bisphenol in thermal paper, and the European Union has banned BPA in receipts.²⁵ Additionally, safer and cost-effective alternatives already exist in the form of digital receipts.

Related/Prior Legislation

SB 1266 (Limon, Chapter 790, Statutes of 2024) revises the existing prohibition on BPA in a juvenile bottle or cup established by AB 1319 (Butler, Chapter 467, Statutes of 2011) to instead prohibit the manufacture or sale of any juvenile's feeding, sucking, or teething product that contains any form of bisphenol above the practical quantitation limit to be determined by DTSC.

AB 347 (Ting, Chapter 932, Statutes of 2024). Requires DTSC to enforce and ensure compliance with three existing laws that set limits for PFAS in food packaging, textiles, and juvenile products.

AB 1319 (Butler, Chapter 467, Statutes of 2011) prohibits the sale, manufacture or distribution of a bottle or cup or a liquid, food or beverage in a can, jar or plastic bottle that contains BPA if the item is primarily intended for children three years of age or younger.

AB 1148 (Sharp-Collins, 2025) prohibits, on and after January 1, 2027, a person from manufacturing, distributing, selling, or offering for sale food packaging that contains intentionally added bisphenols or ortho-phthalates. The hearing for this bill in the Senate Environmental Quality Committee was canceled at the request of the author.

AB 2244 (Ting, 2024) would have prohibited a receipt provided to a consumer by a business or created by a manufacturer from containing, beginning on January 1, 2025, internationally added BPA followed by, beginning January 1, 2026, any bisphenols. This bill was held on the suspense file in the Senate Appropriations Committee.

AB 1347 (Ting, 2023) would have prohibited, on and after January 1, 2024, a paper receipt provided to a consumer by a business from containing BPA and, on and after January 1, 2025, a paper receipt provided to a consumer by a business from containing any bisphenols. This bill was held on the suspense file in the Senate Appropriations Committee.

²⁵ Maffini, M. (2026) *The European Union marks one year of its BPA ban...where is the FDA?* EDF Health. <https://blogs.edf.org/health/2026/01/12/the-european-union-marks-one-year-of-its-bpa-banwhere-is-the-fda/>

AB 161 (Ting, 2019) would have prohibited a paper receipt provided to a consumer by a business from containing BPA or BPS. This bill was held on the suspense file in the Senate Appropriations Committee.

DOUBLE REFERRAL:

If this measure is approved by the Senate Environmental Quality Committee, the do pass motion must include the action to re-refer the bill to the Senate Judiciary Committee.

SOURCE: Breast Cancer Prevention Partners, Californians Against Waste

SUPPORT:

350 Bay Area Action
350 Contra Costa Action
A Voice for Choice Advocacy
Active San Gabriel Valley
Alliance of Nurses for Healthy Environments
American Nurses Association - California
American Sustainable Business Network
Ban Single Use Plastic (SUP)
Between the Waters
Beyond Plastics
Blue Ocean Warriors
Breast Cancer Prevention Partners
California Black Health Network
California Climate Action Now!
California Communities Against Toxics
California Health Coalition Advocacy
California Nurses for Environmental Health and Justice
California Product Stewardship Council
Californians Against Waste
Calpirg, California Public Interest Research Group
Clean Earth 4 Kids
Clean Water Action
Climate Reality Project, Los Angeles Chapter
Climate Reality Project, Orange County
Community Environmental Council
Courage California
Earthday.org

Ecology Center
Endangered Habitats League
Environmental Working Group
Facts: Families Advocating for Chemical & Toxics Safety
Friends Committee on Legislation of California
Glendale Environmental Coalition
Global Alliance for Incinerator Alternatives (GAIA)
Green America
Green Science Policy Institute
Healthy Children Project, INC.
I'm Hoi Strategies
Just Zero
Learning Disabilities Association of America
Mendez Law
National Association of Environmental Medicine (NAEM)
Natural Resources Defense Council (NRDC)
Nontoxic Neighborhoods
Northern California Recycling Association
Pacific Environment
Physician and Scientist Network Addressing Plastics and Health
Physicians for Social Responsibility - Los Angeles
Physicians for Social Responsibility - San Francisco Bay
Plastic Pollution Coalition, a Project of Earth Island Institute
San Francisco Baykeeper
Santa Cruz Climate Action Network
Save the Albatross Coalition
Sunrise Bay Area
The Keep a Breast Foundation
The Last Beach Cleanup
The Last Plastic Straw
The Story of Stuff Project
Toxic Free Future
Trillium Asset Management
West Berkeley Alliance for Clean Air and Safe Jobs
West Marin Environmental Action Coalition
Worksafe
Yosemite Rivers Alliance
Zero Waste Ithaca
Zero Waste San Diego

OPPOSITION:

California Restaurant Association

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