

# BPA

## Buyer Beware

Toxic BPA and regrettable substitutes found in the linings of canned food



A REPORT BY:

Breast Cancer Fund, Campaign for Healthier Solutions,  
Clean Production Action, Ecology Center, Mind the Store Campaign

# Executive Summary

This report, Buyer Beware: Toxic BPA & Regrettable Substitutes in the Linings of Canned Food, was conceived, authored and produced as a collaborative effort by the Breast Cancer Fund; Campaign for Healthier Solutions; Clean Production Action; Ecology Center; Environmental Defence (Canada); and Safer Chemicals, Healthy Families' Mind the Store campaign.

Bisphenol A (BPA) is a toxic, endocrine-disrupting chemical that negatively impacts our hormonal systems, contributing to a host of harmful health effects. Hundreds of scientific studies have linked extremely small amounts of BPA, measured in parts per billion and even parts per trillion, to an increased risk of breast and prostate cancer, infertility, type-2 diabetes, obesity, asthma, and behavioral changes including attention deficit disorder. It is likely that people are exposed to BPA from canned foods at levels that are compromising our health.

---

## OUR RESEARCH

---

This investigation consolidates and builds on the evidence presented in previously released reports on BPA in food packaging by performing three important tasks:

1. Identify and analyze the interior linings and lids of nearly 200 canned foods, including — for the first time ever — the replacement materials for BPA-based epoxy being used by national brands and retailers, and the extent to which those companies have studied the safety of these materials
2. Present a summary of dozens of can coating types approved for use by the FDA since the agency publicly announced its support for industry action to remove BPA from food packaging in 2010, and show the replacements' potential health hazards
3. Follow up on the promises made by major national brands and retailers — and survey the policies they have adopted — to gauge their responsiveness to the intensifying public demand for full disclosure of ingredients and safety data on the chemicals in linings of food cans.

---

## OUR GOALS

---

A collaboration of non-governmental organizations (NGOs) throughout the United States and Canada participated in this product-testing investigation conducted by the Ecology Center. These were our goals:

1. Determine to what extent BPA-based epoxy linings are still being used by major national brands and retailers in canned food linings, and whether these companies have policies in place to disclose and/or phase out its continued use
2. Determine the types of substitutes used in “BPA-free” can linings, and to what extent the safety of these substitutes has been studied
3. Identify company leaders and laggards in reducing the use of BPA in can linings
4. Generate solutions for moving the market toward informed substitution and safer, non-BPA alternatives for canned food linings.

NGOs collected canned food for testing and also surveyed well-known national food brands, grocery stores and big box retailers. This report analyzed the interior coatings and lids of 192 cans containing vegetables, fruits, soups, broth, gravy, milks and beans. Canned food was collected in 19 U.S. states (see appendix in the full Report) and one Canadian province. The Cans Not Cancer and Mind the Store campaigns, along with Environmental Defence (Canada), also surveyed leading national brands and the largest retailers of canned food to find out what policies they have in place to phase out the use of BPA-based epoxy and to avoid regrettable substitutions.

---

## KEY FINDINGS

---

Our findings were alarming. We expected that the explosion in consumer demand for BPA-free packaging would have resulted in swifter action by canned food brands and retailers. However, 67 percent of the cans tested (129 out of 192) contained BPA-based epoxy in the body and/or the lid.

## Toxic BPA Is Still Hiding in Many Popular National Brands of Canned Food

- Our analysis showed that, across the board, canned food manufacturers both large and small are not making good on their promises to discontinue use of BPA.
- In the samples we tested, 100% of Campbell's cans (15 out of 15) contained BPA-based epoxy, even though the company claims to be making significant progress in its transition away from BPA.
- 71% of sampled Del Monte cans (10 out of 14) tested positive for BPA-based epoxy resins.
- 50% of sampled General Mills cans (6 out of 12, including Progresso and Green Giant) tested positive for BPA.
- Although fewer cans were tested for these large companies, all 3 cans from McCormick & Company (Thai Kitchen) and all 3 cans from Nestlé (Nestlé Carnation) contained BPA-based epoxy.
- All of the cans sampled from 5 smaller brands also tested positive for BPA-based epoxy: Empire Company Limited (3 out of 3); Goya Foods (2 out of 2); Ocean Spray Cranberries (2 out of 2); Thai Agri Foods (2 out of 2); and Vilore Foods (2 out of 2).
- Although Campbell's, McCormick and Nestlé have indicated their intentions to transition out of BPA use by 2016 or 2017, survey responses from Del Monte Foods, General Mills, Hormel and J.M. Smucker Company did not indicate a goal or timeline to move away from BPA can linings.
- But not all the news is bad:
  - Amy's Kitchen, Annie's Homegrown (recently acquired by General Mills), Hain Celestial Group and ConAgra have fully transitioned away from the use of BPA and have disclosed the BPA alternatives they're using. No BPA-based epoxy resins were detected in any of the cans tested from these brands.
  - Eden Foods reported eliminating the use of BPA-based epoxy liners in 95% of its canned foods and stated that it is actively looking for alternatives. No BPA epoxy was detected in the Eden canned foods that were tested.

See the full Report for more testing results.

## Test Results and BPA Policies Vary Widely in Retailers' "Private-Label" Canned Food

- Grocery stores, big box retailers and dollar stores are not doing enough to eliminate and safely replace BPA in their canned food. In the aggregate, 62% of retailers' private-label canned food tested positive for BPA-based epoxy resins, including samples from the brands of popular retailers such as Albertsons (Albertsons, Randalls, and Safeway), Dollar General, Dollar Tree (Dollar Tree and Family Dollar), Gordon Food Service, Kroger, Loblaws, Meijer, Target, Trader Joe's, Walmart and Whole Foods.
- Five retailers — Dollar General, Dollar Tree (Dollar Tree and Family Dollar), Gordon Food Service, Meijer and Target — had BPA-based epoxy coatings in all tested cans of beans and tomatoes.
- **Grocery retailers:** BPA was found in the majority of private-label canned goods tested at the two biggest dedicated grocery retailers in the United States: Kroger and Albertsons (Safeway). In private-label cans, 62% of Kroger products (13 out of 21), and 50% of Albertsons products (8 out of 16 from Albertsons, Randalls, Safeway) tested positive for BPA-based epoxy resins. While both retailers have adopted policies to reduce BPA in canned food, our testing revealed BPA is still commonly found in their products.
- **Big box retailers:** BPA was found in private-label cans sold at both Target and Walmart, the largest grocery retailer in the United States. In their private-label products, 100% of Target cans (5 out of 5), and 88% of Walmart cans (7 out of 8) tested positive for BPA-based epoxy resins. Our survey revealed that neither of these two major retailers has policies in place to eliminate BPA in canned food, unlike competing grocery retailers.
- Discount retailers (commonly known as 'dollar stores') were among the laggards in transitioning away from BPA in can linings. Our testing revealed that 83 percent of Dollar Tree and Family Dollar private-label cans (5 out of 6) and 64 percent of Dollar General private-label cans (9 out of 14) were coated with BPA-based epoxy resins. This is especially a problem because discount retailers are often the major retail outlet in low-income communities — which already face the highest levels of BPA exposure.

- **Canadian retailers:** BPA in canned foods is a problem that is not restricted to the United States. In Canada, 80% of Loblaw's private-label cans (4 out of 5) tested positive for BPA-based epoxy resins. Loblaw's is the largest grocery chain in Canada.
- **No comprehensive safe substitution policies:** While some retailers have made progress in reducing the use of BPA in canned food, no retailer has a policy in place to completely eliminate BPA in all of its canned food. No retailers have specific timelines for phasing out BPA, nor have they conducted transparent assessments of the alternative linings.
- **Some retailers are making progress:** Albertsons, Safeway, Kroger, Publix, Wegmans and Whole Foods have adopted policies to reduce the use of BPA in their private-label canned food. Whole Foods has clearly adopted the strongest policy of the retailers. Whole Foods reports that store brand *"buyers are not currently accepting any new canned items with BPA in the lining material."*

See the full Report for more test results.

The continued presence of BPA — and potentially unsafe alternatives — in the lining of canned foods has resulted in ongoing hazardous exposures to workers, low-income populations, pregnant women, children and other vulnerable populations.

## "BPA free" May Not Mean Safe

Our investigation raises the concern that retailers and brands could be replacing BPA-based epoxy with regrettable substitutes. Identifying the safety of BPA alternatives is challenging, given the limited FDA review and approval of packaging additives and the highly protected trade secrets in this product sector. Further, there is very little data in the published scientific literature regarding the health effects of BPA epoxy replacements, nor is this data publicly available from the FDA.

Five major coating types were identified among the 192 cans tested: acrylic resins, BPA-based epoxy, oleoresin, polyester resins, and polyvinyl chloride (PVC) copolymers. We know very little about the additives used in these compounds to give them the properties that make them stable and effective can linings. Our research does demonstrate that there are multiple formulations of most of these compounds, but there is no way to determine the specific chemicals used or how they are produced.

We found that 18% of retailers' private-label foods and 36% of national brands were lined with a PVC-based copolymer. This is clearly a regrettable substitute, because PVC is a polymer made from vinyl chloride, a known carcinogen.

Similarly, many of the acrylic linings included polystyrene, a plastic made from the styrene monomer which is considered a possible human carcinogen. All plastics contain some level of residual or unreacted monomer. We found that 39% of cans had a polystyrene-acrylic combination. Data is not publicly available to indicate at what level monomers like vinyl chloride or styrene migrate from the can linings into food. For the other coating types, the lack of safety data and unknown additives mean we have no reliable data attesting to the safety of these compounds.

## When It Comes to Labeling, It's Anyone's Guess

- Even though most national brands — and a number of private-label retail brands — now claim to be manufacturing BPA-free canned foods, few are *labeling* their products BPA-free, with the notable exception of Amy's Kitchen and Eden Foods.
- Only a handful of national brands and retailers are disclosing which BPA-replacement chemicals they're using. These include Amy's Kitchen, Annie's Homegrown, ConAgra, Eden Foods and Hain Celestial Group. However, the safety data for these alternatives is not publicly available.
- No national brand or retailer discloses its BPA alternatives on the label.
- No manufacturer or retailer is labeling which of its canned foods have BPA-based epoxy in the linings.

## All Foods Are Not Created Equal When It Comes to Cans

Food companies choose coatings for their cans in part based on properties of the food. For example, tomatoes, which are highly acidic, react with

oleoresin, causing an unpleasant taste. Our findings illustrate the complex can lining requirements posed by different types of foods:

- All food categories had at least some cans coated with BPA-based epoxy, reflecting the fact that this coating type, unlike the alternatives, is used in all types of food.
- The corn and peas category was the least likely overall to contain BPA-based epoxy, either as a single coating or in combination with another coating, and the most likely to contain oleoresin, a plant-based substitute
- Broth and gravy cans were the most likely overall to contain BPA-based epoxy. 100% of broth and gravy can lids were coated with BPA-based epoxy. All broth and gravy can bodies were coated with either BPA-based epoxy (40% of broth/gravy bodies) or a combination of BPA-based epoxy and an acrylic resin (60% of broth/gravy bodies).
- Canned milks (including evaporated, sweetened condensed, and coconut) also had a high frequency of BPA-based epoxy (85% of bodies, 45% of lids).

See the full Report for more testing details by product type.



---

## RECOMMENDATIONS

---

The continued presence of BPA — and potentially unsafe alternatives — in the lining of canned foods has resulted in ongoing hazardous exposures to workers, low-income populations, pregnant women, children and other vulnerable populations.

1. **National brands, grocery stores, big box retailers and dollar stores** should take these steps:

- Commit to eliminating and safely substituting BPA from all food packaging, replacing it with safer alternatives, and establishing public timelines and benchmarks for the transition.
- Conduct and publicly report on the results of “alternatives assessments,” using the GreenScreen® for Safer Chemicals or a similar third-party certification tool for assessing the safety of can linings.
- Label all chemicals used in can liners, including BPA or BPA alternatives; and demand that their suppliers of canned food linings fully disclose safety data, so as to provide a higher level of transparency to consumers.
- Adopt comprehensive chemical policies to safely replace other chemicals of concern in products and packaging.

2. **Can-lining suppliers** need to see themselves as part of the solution by publicly disclosing the chemical composition of their can linings and ensuring that the final materials have been rigorously assessed for their impacts on environmental and human health.

3. **Congress** should adopt the “Ban Poisonous Additives Act” to reform the FDA’s fatally flawed system for reviewing and approving the safety of packaging materials.

This report is meant to serve as a wake-up call for national brands and retailers of canned food who are jumping from the frying pan into the fire by eliminating BPA and potentially replacing it with regrettable substitutes. Consumers want BPA-free canned food that is truly safer, not canned food lined with chemicals that are equally or more toxic.

Until we see federal policy reform and voluntary market-based solutions that provide people with the information they need to make safe and informed purchases of canned food, we recommend that consumers take action to demand change:

1. **Consumers should reinforce and strengthen their call for safer canned foods in the following ways:**



**Steps  
Consumers  
Can Take**

- Support the “Ban Poisonous Additives Act” and other federal policy initiatives that would require the FDA to more strictly regulate the safety of food packaging
- Demand that their favorite national brands and retailers take these steps:
  - Set a time frame to eliminate BPA and use safe substitutes in the lining of canned foods and other food packaging;
  - Label the presence of BPA and BPA-alternative chemicals in their can linings; and
  - Publicly disclose safety data for their BPA alternatives.
- Vote with their pocketbooks and only purchase canned food from manufacturers and retailers that fully disclose the identity and safety of their can linings.
- Avoid canned foods whenever possible, choosing fresh and frozen instead.
- Join the campaigns listed in this report and visit their websites for additional information and updates:

[www.breastcancerfund.org](http://www.breastcancerfund.org)

[www.MindTheStore.org](http://www.MindTheStore.org)

[www.cleanproduction.org](http://www.cleanproduction.org)

[www.ecocenter.org](http://www.ecocenter.org)

[www.nontoxicdollarstores.org](http://www.nontoxicdollarstores.org)

[www.environmentaldefence.ca](http://www.environmentaldefence.ca)

## ACKNOWLEDGMENTS

Thank you to the principal authors of this report:

- Connie Engel, Janet Nudelman, Sharima Rasanayagam and Maija Witte from the Breast Cancer Fund, with support from Nancy Buermeyer, Emily Reuman and Katie Gibbs
- Beverley Thorpe from Clean Production Action
- Jeff Gearhart and Gillian Miller from the Ecology Center
- Mike Schade from Safer Chemicals, Healthy Families
- Jose Bravo from the Campaign for Healthier Solutions

We would also like to acknowledge the report's communications team:

- Ena Do from the Breast Cancer Fund
- Erica Bertram from the Ecology Center
- Tony Iallorardo from Safer Chemicals, Healthy Families
- Eric Whalen, Coming Clean

A very special thank-you to the report's external review team:

- Ann Blake, PhD, Environmental & Public Health Consulting
- Maricel Maffini, PhD, Independent Consultant
- Erika Schrader, MA, Washington Toxics Coalition
- Laura Vandenberg, PhD, Assistant Professor, University of Massachusetts–Amherst School of Public Health & Health Sciences, Department of Environmental Health Sciences

Our deep gratitude is also extended to the Ecology Center for coordinating all of the report's methods development, product testing and analysis, and to the Breast Cancer Fund for editing the report and serving as its project manager.

This report would not have been possible without the help of 22 organizations in 19 U.S. states and one province in Canada (Ontario), which participated in our Canned Food Testing Report by serving as our can collectors. Special thanks to Environmental Defence (Canada) for their assistance. Please see Appendix in the full Report for a full list of those who participated.

**This report was conceived, authored and produced as a collaborative effort by the following organizations:**

### Breast Cancer Fund

The Breast Cancer Fund is the leading national organization working to prevent breast cancer by eliminating our exposure to toxic chemicals linked to the disease.

We translate the growing body of scientific evidence linking breast cancer and environmental exposures into public education and advocacy campaigns that protect our health and reduce breast cancer risk. We help transform the way our society thinks about and uses chemicals and radiation, with the goal of preventing breast cancer and sustaining health and life. We find practical solutions so that our children, our grandchildren and the planet can thrive.

### Campaign for Healthier Solutions

The Campaign for Healthier Solutions is led by the Environmental Justice Health Alliance for Chemical Policy Reform (EJHA) and Coming Clean. The campaign seeks to work with discount retailers and dollar stores to help them protect their customers, and the communities in which they operate, by implementing corporate policies to identify and phase out harmful chemicals in the products they sell.

### Clean Production Action

Clean Production Action works with companies, governments and advocates to promote safer alternatives to toxic chemicals in products and supply chains. CPA's GreenScreen® for Safer Chemicals is now the leading chemical hazard assessment tool to identify safer chemicals.

### Ecology Center

The Ecology Center educates consumers to help keep their families healthy and safe; pushes corporations to use clean energy, make safe products and provide healthy food; provides people with innovative services that promote healthy people and a healthy planet; and works with policymakers to establish laws that protect communities and the environment.

### Safer Chemicals Healthy Families' Mind the Store Campaign

The Mind the Store campaign is challenging the nation's biggest retailers to adopt comprehensive chemical management policies to disclose, reduce, eliminate and safely replace the Hazardous 100+ Chemicals of High Concern and other toxic chemicals in products. The Safer Chemicals, Healthy Families coalition represents more than 11 million individuals and includes parents, health professionals, advocates for people with learning and developmental disabilities, reproductive health advocates, environmentalists and businesses from across the nation.