

BPA / BPS, DBP & DEHP: The Plastic Chemicals found in Legacy and WIC- Approved Infant Formula

The Clean Label Project® analyzed leading 59 infant formulas for contaminants, including heavy metals (lead, cadmium, arsenic, mercury), bisphenols (BPA, BPS), phthalates (DBP and DEHP), glyphosate, pesticides, and more.



Executive Summary:

Key Data and Findings from Infant Formula Category Refresh Insights Report

Introduction

The Clean Label Project® was established with the mission to uncover the hidden risks associated with environmental contaminants and toxins found in everyday products. The guiding principle is clear: reducing contaminants is critical to safeguarding long-term health. While we know these toxins can be harmful, the long-term effects are still coming to light. Clean Label Project® calls on stakeholders - brands, consumers, retailers, the medical community, and regulators - to tackle these critical issues. This document details key findings on industrial contaminants in popular legacy infant formulas, many of which are subsidized by the WIC (Women, Infants, and Children) program. Clean Label Project®'s goal is to highlight the gaps in traditional nutritional labels and set new safety expectations for consumer products.

The [United States Infant Formula Market is estimated to be valued at USD \\$7.53 Bn in 2025 and is expected to reach USD \\$10.32 Bn by 2032](#). Over [50% of the US infant formula is purchased by the states through the WIC program](#). While many parents assume that the infant formula they give their baby is safe, the “Clean Label Project’s Infant Formula Category Refresh Insights Report” uncovers significant findings regarding plastic contaminants in these products that are of concern. This report tested 59 infant formula products, 19 of them leading retail and WIC-approved brands, revealing that an alarming **94.7% (or 18 out of the 19 Retailer Private Label & WIC-approved products) contained harmful plastic phthalates DBP and/or DEHP**, and **21.1% (or 4 out of the 19 Retailer Private Label & WIC-approved products) contained bisphenols, BPA and BPS**.

The Clean Label Project® conducted over **9,000 individual tests on contaminants**, including heavy metals (lead, cadmium, arsenic, mercury), bisphenols (BPA, BPS), phthalates (DBP and DEHP), pesticides, and more. These chemicals, known for their potential health risks, can contaminate infant formulas through environmental exposure, ingredients, manufacturing processing, and/or packaging materials. The study's results underscore that, despite an increasingly health-conscious market, many products may contain unsafe levels of contaminants that are not listed or disclosed on conventional nutrition labels.

This study was segmented into two separate categories:

Legacy Brands (19 Products Tested):

- 7 WIC-Approved Products (Manufactured by Enfamil & Similac)
- 12 Retailer Private Label Products

Non-Legacy Brands (40 products tested)

- All other smaller-scale infant formula products that are not part of the WIC program and are not retailer private label brands.

The Clean Label Project® finds trace amounts of heavy metals in almost every product it tests. While heavy metals are everywhere, the objective is to continue to reduce contaminants, moving as close to zero as possible. This is especially important for infant and baby products. In our 2025 category study of infant formulas, heavy metals dropped significantly from our previous study 4 years ago. This is encouraging news for parents and their babies. While heavy metals have dropped considerably since our last study, there are slight differences between Legacy and Non-Legacy brands in arsenic, cadmium, and lead.



Arsenic findings of the 59 products tested:

Arsenic	Samples Tested	Low (ppb)	High (ppb)	Mean (ppb)
Legacy	19	1.2	12.2	5.7
Non-Legacy	40	0.3	7.2	3.1

Cadmium findings of the 59 products tested:

Cadmium	Samples Tested	Low (ppb)	High (ppb)	Mean (ppb)
Legacy	19	0.0	8.0	1.1
Non-Legacy	40	0.0	4.1	0.8

Lead findings of the 59 products tested:

Lead	Samples Tested	Low (ppb)	High (ppb)	Mean (ppb)
Legacy	19	0.0	8.7	1.9
Non-Legacy	40	0.0	4.0	1.8

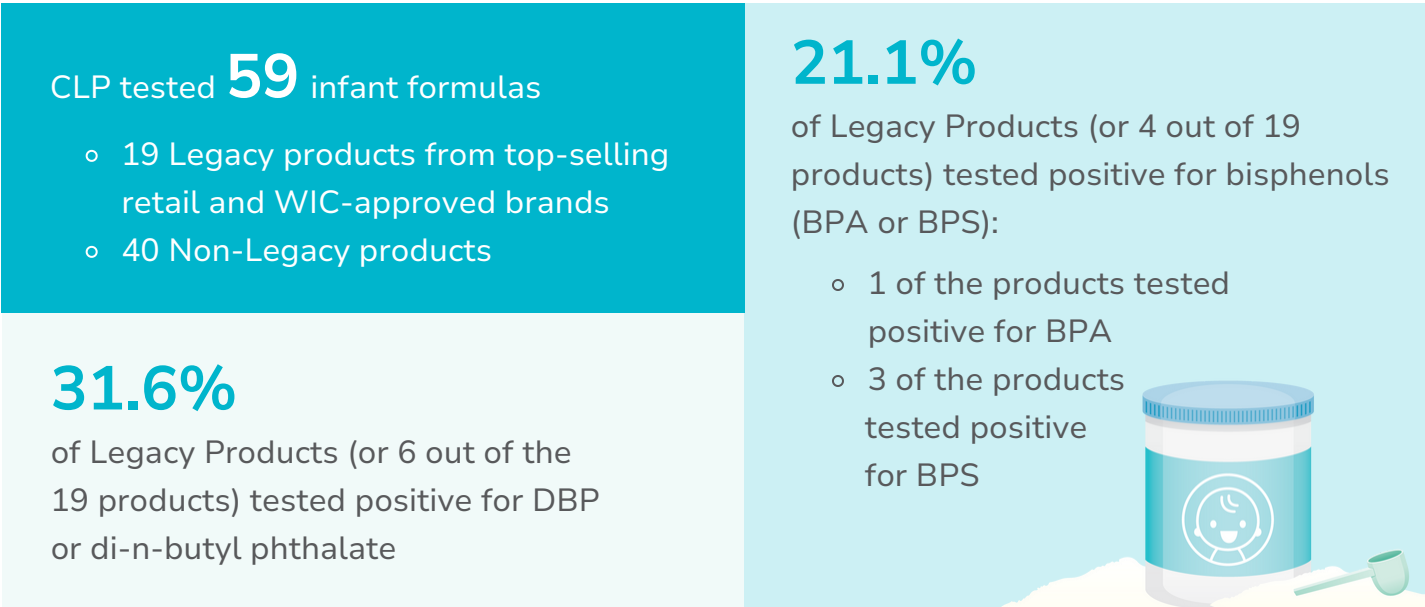
While significant focus has been given to heavy metals in infant formula, the detection of plastic chemicals found in almost every legacy product tested by Clean Label Project®, and the associated health implications, cannot be ignored.

Given the lack of comprehensive federal regulations specifically addressing phthalates (DBP & DEHP) in infant formula, it is critical that the industry independently takes proactive measures to address this issue. Clean Label Project®'s findings call for a new level of transparency and stricter safety standards to protect consumers from long-term exposure to these contaminants.

Clean Label Project® hopes this report catalyzes an important conversation about the safety of infant formula products, empowering consumers to make informed choices and urging manufacturers to establish higher standards for ingredients, manufacturing, and packaging.

By exposing these hidden risks, Clean Label Project® advocates for an industry-wide commitment to cleaner products.

Key Data and Findings of Phthalates & Bisphenols from Infant Formula:



DBP	Samples Tested	Low	High	Mean	# of Hits	% of Hits
Category	59	0.0	13.1	1.0	7	11.9%
Legacy	19	0.0	13.1	3.2	6	31.6
Non-Legacy	40	0.0	0.8	0.0	1	2.5

DEHP	Samples Tested	Low	High	Mean	# of Hits	% of Hits
Category	59	0.0	39.6	7.4	21	35.6%
Legacy	19	0.0	39.6	14.3	18	94.7%
Non-Legacy	40	0.0	7.1	0.4	3	7.5%

Why Infant Formulas?

Parents around the globe are feeding their babies infant formula multiple times a day, relying on them to provide essential nutrition for their children. They expect the products to be free from harmful industrial chemicals.

At Clean Label Project®, we don't take safety at face value — we rely on data and scientific evidence to uncover what substances consumers are actually exposed to. Our mission is to promote and protect transparency.



What Industrial Contaminants Were Found in the Clean Label Project®'s Infant Formula Study?

Infant formulas evaluated by Clean Label Project® showed detectable levels of phthalates: DBP (di-n-butyl phthalate) and DEHP (di(2-ethylhexyl) phthalate).

To put this into perspective, Clean Label Project®'s partner lab, Ellipse Analytics, tested more than 40 infant formula products for certification in 2025. Only one product showed trace levels of DBP (below 1 ppb), and just four tested positive for DEHP. None of these infant formulas tested positive for either BPA or BPS.

Discovering DBP and DEHP in more than 90% of our infant formula category study samples prompted us to investigate the various pathways through which these plastic chemicals (phthalates and bisphenols) could contaminate infant formulas.

Where are These Contaminants Coming From?

DBP (di-n-butyl phthalate) and DEHP (di(2-ethylhexyl) phthalate) can contaminate infant formula products in several ways.

DBP can leach into infant formula primarily through migration from plastic packaging and food processing equipment.

DEHP is a plasticizer used to make plastics more flexible. It can enter food products through processing equipment and packaging materials, or through other environmental contamination. DEHP is not chemically bound to plastics, so it can easily leach into food, especially fatty or oily foods, and its migration is often increased by heat. DEHP is part of the FDA's [GRAS \(Generally Recognized As Safe\) list](#). Our testing has found DEHP in many different categories we've analyzed, such as protein powder, cereal, and snack bars.

What are the health risks from DBP and DEHP?

[DBP \(Di-n-butyl phthalate\)](#) and [DEHP \(Di\(2-ethylhexyl\) phthalate\)](#) are plastic chemical phthalates, or plasticizers, and studies have shown they act as endocrine disrupters that can also cause reproductive and developmental harm in children.

Health risks include reduced male fertility, developmental problems in children such as changes in growth or behavioral patterns, and increased risks for obesity, type 2 diabetes, and allergic diseases. These chemicals can be absorbed through skin contact, inhalation of dust and air, or ingestion from contaminated products and are of particular concern for children and during pregnancy.

Aren't These Contaminants Regulated?

There are no comprehensive federal regulations specifically addressing dietary exposure to industrial chemicals in food and medicine, as most safety measures concentrate on physical and microbiological contaminants.

There are no actual federal restrictions on the usage of DBP and DEHP. Every year, Clean Label Project® conducts 8-12 category studies, which continually find a high percentage of samples contain phthalates. DEHP appears on the FDA's GRAS list and, due to its role as a plasticizer enhancing plastic flexibility, is commonly found in components of machinery used in food and consumer goods production, including industrial belts, processing equipment, bottles, bags, gaskets, etc....

Over the past decade, the Clean Label Project® has analyzed bisphenols (BPA and BPS) across a range of product categories. While BPA and BPS were frequently found in earlier studies, they are now rarely detected. Given this, the detection of bisphenols in 21% of legacy and WIC-approved infant formula products was unexpected.

What's the Clean Label Project®'s Methodology?

Clean Label Project® purchased and rigorously tested 59 of the top-selling legacy and WIC-approved infant formulas, sourced from both retailer and state WIC government data. The scope of testing assessed multiple panels of industrial and environmental contaminants. Collaborating with Ellipse Analytics, an ISO 17025-accredited analytical chemistry lab, Clean Label Project® amassed over 9,000 data points from those 59 products to benchmark the findings.

How Does Clean Label Project® Measure These Contaminants?

Clean Label Project® contracted an independent analytical chemistry laboratory, Ellipse Analytics, to test five industrial chemical panels:

- ⚠️ **Bisphenols**
- ⚠️ **Heavy Metals**
- ⚠️ **Phthalates**
- ⚠️ **Pesticides**
- ⚠️ **Glyphosate**

The heavy metals (arsenic, cadmium, lead, and mercury), were tested by Inductively Coupled Plasma – Mass Spectroscopy (ICP-MS); phthalates were tested by Gas Chromatography – Mass Spectroscopy (GC-MS/MS); and bisphenols, glyphosate, and pesticides were tested by Liquid Chromatography – Tandem Mass Spectroscopy (LC-MS/MS).



Which Legacy (Private Label & WIC-Approved) Infant Formulas Did We Test?

- Enfamil Infant Formula
- Enfamil Gentlease
- Similac Advance
- Similac Soy Isomil
- Similac Sensitive Milk-Based
- Similac 360 Total Care
- Aptamil Care Stage 2 Milk-Based Powder Infant Formula
- Enfamil Nutramigen Hypoallergenic Infant Formula Powder with Iron
- Nestle Nido Kinder Toddler Milk Beverage
- Pepticate Infant Hypoallergenic Infant Formula
- Mama Bear (Amazon) Mama Bear Advantage Premium
- Good Start Gentle Pro
- Pure Bliss Irish Farms Infant Formula
- EleCare Amino Acid-Based Powder Infant Formula
- Parent's Choice Gentle Infant Formula Milk-Based with Iron
- Walgreens Sensitivity Premium Infant Formula Milk-Based Powder with Iron
- up&up Gentle Premium Powder Infant Formula
- CVS Health Advantage Premium Infant Formula with Iron Milk-Based Formula
- Comforts Gentle Premium Infant Formula Milk-Based Powder with Iron



What Should Content-Conscious Consumers Look For?

Our mission is to empower consumers by delivering accurate and reliable product information based on our testing and analysis of the products they buy.

This data enables consumers to make informed choices that prioritize safety and quality in the infant formula they purchase.



“We have the data to inform the standards for infant formula—products that nourish our most vulnerable population,” said **Molly Hamilton, Executive Director of Clean Label Project®**. “It’s critical that we update these standards to ensure formulas are both nutrient-dense and clean to support the long-term health of our children.”

The following companies have infant formulas that are Clean Label Project® Certified and are some of the top infant formula products in the market:

- [A2 Infant Nutrition Limited](#)
- [Bobbie Baby](#)
- [Bubs](#)
- [ByHeart](#)
- [Hain Celestial \(Earth’s Best\)](#)
- [Haven Nutrition](#)
- [Kabrita](#)
- [Kendal Nutricare](#)
- [LittleOak](#)
- [Nara Organics](#)
- [Nurture, LLC \(Happy Family Organics\)](#)
- [PediaGroup](#)
- [Serenity Kids](#)
- [Vinamilk](#)
- [Voyager Milk](#)



For a full list of products
Clean Label Project® evaluated, please visit the
website at www.cleanlabelproject.org