

CAMPAIGN FOR Healthier Solutions

Product Chemical Hazard Screening Report

APRIL 2022



EXECUTIVE SUMMARY

The Campaign for Healthier Solutions a project of Coming Clean Inc. and the Environmental Justice and Health Alliance commissioned The Ecology Center Healthy Stuff Lab to conduct a screening of consumer products sold at discount retailers, also known as dollar stores. This report presents a summary of the results of the testing and highlights select products with hazardous chemicals of concern from Five Below. Thirty-eight (38) Five Below products were purchased and tested.

Sample Collection: In early 2021, 226 products were purchased from all of the leading dollar store retailers in the US and Canada. Products were purchased from seven states (Michigan, Pennsylvania, California, New Mexico, Washington, Maine, Texas) and Ontario, Canada. Products tested included 226 consumer products, 33 cans of food, and 22 packages of microwave popcorn. Receipts from 28 store purchases were also tested. The 226 products contained a total of 635 unique components or materials. Each of these were tested using one or more test methods, depending on the typical chemicals of concern for that product type. For food products, the packaging, not the food, was tested.

Chemicals of concern are those which, due to their inherent hazardous properties, present a known or reasonably suspected risk to human health and/or the environment. The levels of concern for each chemical were established by Healthy Stuff Lab by reviewing levels restricted in one or more of the most protective government, corporate, or third-party standards on hazards in consumer products.

These levels are similar to those used in our 2015 sampling of dollar store products. You can access the 2015 report [here](#)

Products were subjected to 4 different analytical techniques:

High-definition X-ray fluorescence spectroscopy (HD XRF): 635 product components were screened for elements of interest by HD XRF using an HD Mobile spectrometer by XOS. This technique measures levels of elements heavier than aluminum on the periodic table. This includes toxic metals such as lead and cadmium as well as bromine, chlorine, and phosphorus that, depending on the matrix, can indicate flame retardant chemicals.

Fourier Transform Infrared (FTIR) spectroscopy:

A subset of components were analyzed by FTIR to determine the polymer type (for example, cotton or polyethylene) and major additives. A subset were also subject to solvent extraction followed by FTIR to test for the presence of additives such as plasticizers or flame retardant chemicals.

Gas Chromatography/Mass Spectrometry (GC/MS)

Analysis: Eleven products determined to contain ortho-phthalates (“phthalates”) or alternative plasticizers according to our FTIR screening were sent for further analysis at Eurofins, a contract laboratory.

Eurofins quantified phthalates by following the CPSC test method CPSC-CH-C1001-09.4. The method uses solvent extraction followed by internal standard addition and analysis of the extract by gas chromatography-mass spectrometry (GC-MS) for phthalates and other plasticizers of interest. The lab tested for eleven phthalates and four alternative plasticizers.

Total Fluorine by Oxygen Flask Combustion and Ion-Selective Electrode: Select food packaging was evaluated for possible PFAS presence at Galbraith Laboratories by measuring total fluorine. This method detects fluorine from both polymeric and non-polymeric PFAS and thus is used to screen items for likely PFAS.

Arsenic > 100	Bromine > 400	Cadmium > 100	Chlorine > 10,000	Chromium > 100	Mercury > 100	Lead > 100	Antimony > 100	Tin > 100
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Threshold Levels, in parts per million

CHEMICAL HAZARD SCREENING SUMMARY FIVE BELOW

The preliminary screening results for the Five Below products indicate a number of chemical hazards are present in these products. **Overall, 66% of the products screened had one or more chemicals of concern.** The following concerns were identified in the products which were tested.

- Electronic products with hazardous flame retardants, including TDCIPP
- Electronic products with >50% lead in solders
- Canned food products with BPA-based epoxy and PVC can body coatings
- Microwave popcorn products with PFAS coatings inside the packaging
- Bisphenol S in 100% of store receipts tested from all retailers
- Products made with flexible PVC which have plasticizers

Number of Products with Chemical of Concern (COC) Detected, above screening level

Retailer	# Products	1 or more COC	Percentage
Five Below	38	25	66%

Note: This data is preliminary and subject to change as further analysis of these products is completed.

FIVE BELOW PRODUCTS TESTED, PRODUCT BRAND/DISTRIBUTOR

12 Days of Jewelry, Plus Bonus Choker — Tonya Creations LLC	Marvel Avengers Kid Safe Headphones — 1616 Holdings, Inc. / Five Below
Animals Cable Squad Cable Accessory, Narwhal Series — 1616 Holdings, Inc. / Five Below	Minecraft Roomscapes Repositionable Poster — Mojang & Jinx Sandy Lion/Trends International/FiveBelow
Blue Matallic Stereo Earbuids — Live, Love, MusicDGL Group, LTD / Five Below	Minnie Mouse Headphones — Disney 1616 Holdings, Inc.
Dart Gun Combat Mask — Playtek 1616 Holdings, Inc.	My Favorite Yoga Mat, 12" X 68" — Series 8 Fitness1616 Holdings, Inc. / Five Below
Disco Color Changing Bath Light — Xtreme Tech Jem Accessories / Five Below	Paw Patrol Water Bottle — &TM Spin Master Ltd. Zak Designs, Inc.
Disney Descendants Karaoke Microphone — Disney1616 Holdings, Inc.	Picnic Mat — Five Below
Disney Frozen II Hair Set Assembly — Townley Townley	Premiere 3D Erasers — Premier 1616 Holdings, Inc. /Five Below
Disney Frozen II Hair Set Ensemble — Disney Townley, Inc	Ready 2 Robot — MGA Entertainer, Inc.
Disney Frozen II Tablecloth, 54 in. x 84 in. — Unique Unique	Round Plastic Tablecover — unique
Disney Nano Matalfigs, 5 Pack Figure Collector Set — Jadatays	Squawkers — 1616 Holdings, Inc
Disney Princess Jidsafe Wireless Headphones, Ages6+ — Disney 1616 Holdings, Inc.	Squishy Unicorn Headphones — Traxx 1616 Holdings, Inc.
Earbuds with Travel Case — PrimeAudio	Summer Waves Beach Ball — Summer Waves
Fil Sports Bottle — Fil 1616 Holdings, Inc. / Five Below	Superman Headphones — Sakar
Fil Stainless Steel Bottle — Fil 1616 Holdings, Inc. /Five Below	Toy Story Logo T-Shirt — Disney/Pixar / Five Below
Frozen II Beauty Set — Taste Beauty	True Wireless Case — Bytech
Frozen II Loot Bags — Unique	Umbrella — Weather Zone Chaby International - Five Below
Frozen II Surprise Necklace — HER Accessories	Unicorn paper plates — Unique
Insulated Cup — Cool Gear International, Inc.	Unique Party! Plastic Tablecover Ranbow Print — Unique Party Favors
Light Up Keyring — Kaplan LP / Five Below	Water Bottle, Save Them All — Five Below Mystic Apparel

FOOD PACKAGING

Chef Boyardee Beef Ravioli	Chef Boyardee Beefaroni
Chicken & Star Shaped Pasta	



FIVE BELOW PRODUCT HIGHLIGHTS

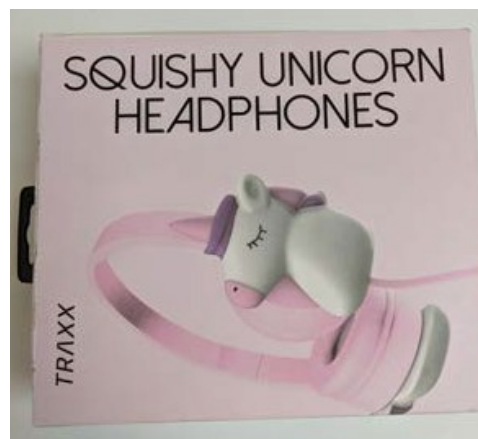
DISNEY FROZEN II HAIR SET ASSEMBLY

Retailer: Five Below
Brand/Distributor: Townley
UPC: 1956542666
Retailer State: Maine
Chemicals of concern: PVC components (>50% chlorine), Ortho Phthalate plasticizer



SQUISHY UNICORN HEADPHONES

Retailer: Five Below
Brand/Distributor: Traxx, 1616 Holdings, Inc.
UPC: 9223406267
Retailer State: California
Chemicals of concern: Ortho Phthalate plasticizer



DISNEY PRINCESS KIDSAFE WIRELESS HEADPHONES, AGES 6+

Retailer: Five Below
Brand/Distributor: Disney, 1616 Holdings, Inc.
UPC: 9223406245
Retailer State: Maine
Chemicals of concern: TDCIPP (chlorinated tris) flame retardant in earphone foam, 65.6% (656,000 ppm) lead in solder



MINNIE MOUSE HEADPHONES

Retailer: Five Below

Brand/Distributor: Disney, 1616 Holdings, Inc.

UPC: 9223401735

Retailer State: Michigan

Chemicals of concern: PVC components (>50% chlorine), Ortho Phthalate plasticizer, TCPP flame retardant, 56% (560,623 ppm) lead in solder



MARVEL AVENGERS KID SAFE HEADPHONES

Retailer: Five Below

Brand/Distributor: 1616 Holdings, Inc

UPC: 9223405437

Retailer State: Michigan

Chemicals of concern: PVC components (>50% chlorine), trichlorophenyl phosphate (TCPP) flame retardant, 38%(381,869 ppm) lead in solder



SUPERMAN HEADPHONES

Retailer: Five Below

Brand/Distributor: Sakar

UPC: 2133180826

Retailer State: Michigan

Chemicals of concern: PVC components(>50% chlorine), Ortho Phthalate plasticizer, trichlorophenyl phosphate (TCPP) flame retardant, 61% (612,081 ppm) lead in solder



DISCO COLOR CHANGING BATH LIGHT

Retailer: Five Below
Brand/Distributor: Xtreme Tech, JemAccessories
UPC: 0510622354
Retailer State: Michigan
Chemicals of concern: Ortho Phthalate plasticizer, 45.6% (456,455 ppm) lead in solder



CAMPBELL'S CHICKEN & STAR SHAPE PASTA

Retailer: Five Below
Brand/Distributor: Campbell's
UPC: 5100015076
Chemicals of concern: PVC copolymer can coating



PURCHASE RECEIPTS

Retailer: Five Below
UPC: N/A
Retailer State: Multiple
Chemicals of concern: All receipts tested positive for Bisphenol S



ACKNOWLEDGEMENTS

The Campaign for Healthier Solutions, a project of the Environmental Justice Health Alliance for Chemical Policy Reform and Coming Clean, would like to recognize the anchor groups, affiliates, and partner organizations that were essential in moving this project forward. Their continued commitment to protect Environmental Justice Communities has made the campaign's progress over the years possible.

We also would like to give a special mention to the Ecology Center Healthy Stuff Lab for testing the products we purchased, then compiling, analyzing, and explaining the data for this report. We have worked with them numerous times in the past and look forward to future collaborations.

CAMPAIGN FOR HEALTHIER SOLUTIONS ANCHOR GROUPS

Los Jardines Institute – Albuquerque, New Mexico

Líderes Campesinas – Oxnard, California

Harambee House – Savannah, Georgia

AFFILIATES AND PARTNER ORGANIZATIONS

Physicians for Social Responsibility-LA – Los Angeles, California

Learning Disabilities Association of Maine – Windham, Maine

Environmental Defence Canada – Toronto, Canada

Clean Production Action

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