

# Mammary Gland Carcinogens and Endocrine Disrupting Chemicals Should Be Disclosed on Personal Care and Cleaning Product Labels

## Background

Sponsored by two Long Island breast cancer coalitions through the Students and Scientists Environmental Research Scholarship Program, **Silent Spring Institute**, an organization devoted to identifying links between the environment and women's health, especially breast cancer, offered internships for two Long Island High School students. Silent Spring Institute is developing recommendations to help consumers select products to reduce exposures to chemicals that can affect breast cancer risk, including mammary gland carcinogens and endocrine disruptors.

## No. Products Evaluated

Store	Count
Alternative	108
Conventional	81
Product Type	
Alternative	114
Conventional	75
Product Category	
Air Freshener	7
All Purpose Cleaner	14
Conditioner	9
Deodorant	10
Dishwashing Soap	15
Dryer Sheets	9
Laundry Detergent	14
Lip Care	15
Lotion	21
Shampoo	7
Shaving	8
Soap	40
Sunscreen	9
Toothpaste	11
<b>Total</b>	<b>189</b>

## Purpose

The purpose of our summer research project was to determine if it is possible for an average consumer to follow the Institute's selection criteria for personal care and cleaning products relying only on ingredient labels.

## Methods

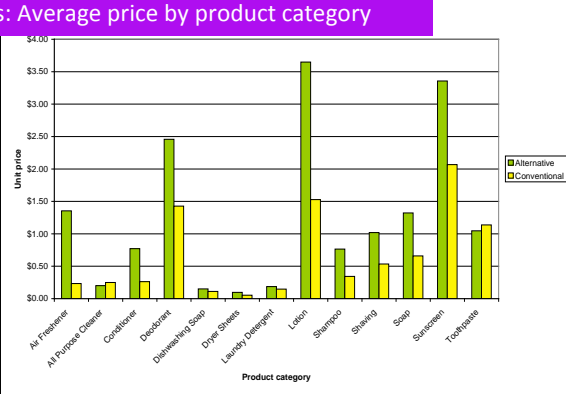
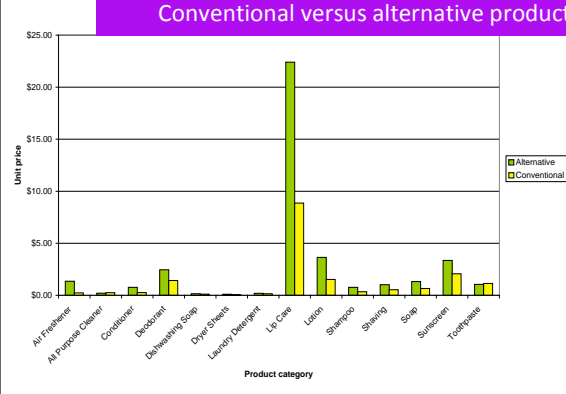
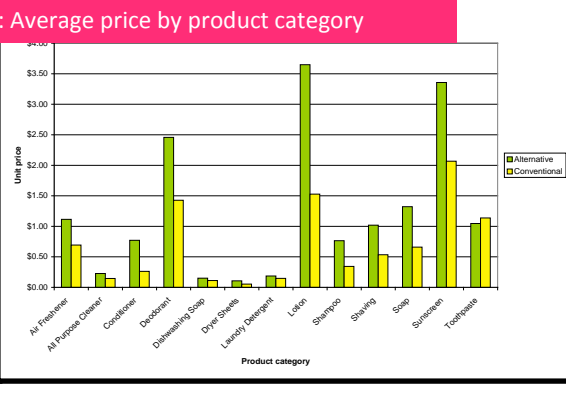
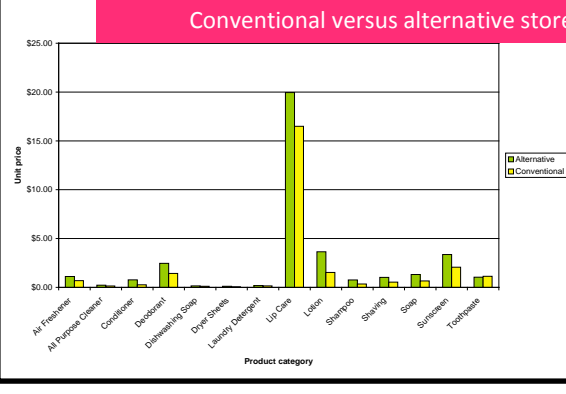
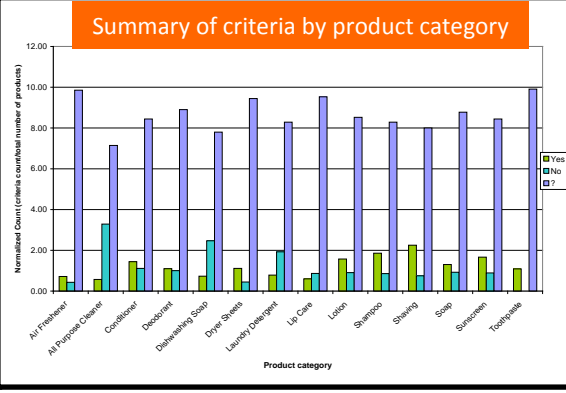
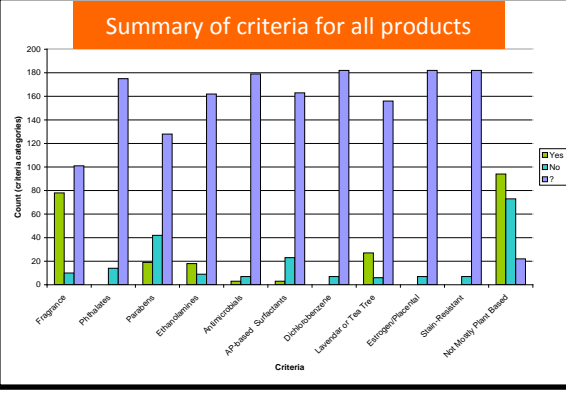
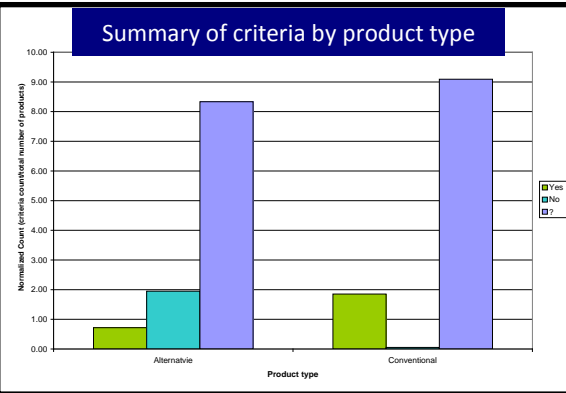
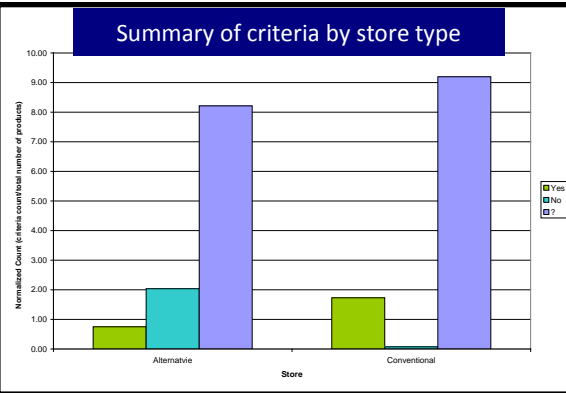
- Selected two local markets, one conventional and one alternative, in Newton, MA
- Picked 5-10 products from 14 categories of cleaning and personal care products.
  - Categories chosen after consulting with an expert and referring to product sale information (personal care only).
  - Picked maker with most shelf space first and then randomly selected 4-9 other products with in that category.
  - Unscented/fragrance free products were chosen first, if those were not available, we randomly picked between other scents (avoiding lavender and tea tree).
- Studied Labels
  - Recorded name, manufacturer, size, price, eco claims.
  - Looked for selection criteria, noted if present, absent, or unsure
- Scanned bar code with UPC scanner (universal product code)
- Analyzed collected data using Excel
- Calculated total number of products studied for each store, product type and category.
- Summarized criteria comparing each store, product type and category.
- Summarized average prices comparing each store, product type and category.

## Selection criteria: product ingredients to avoid

- Fragrance** → May contain EDCs. Listed as "fragrance", "perfume", or "parfum"; products may say "fragrance free."
- Phthalates** → EDCs that are widely used as plastic softeners and personal care products for fragrance. Listed as compounds that end with "phthalate"; products may say "phthalate free."
- Parabens** → EDCs used as preservatives in cosmetics and lotions. Listed as compounds that end with "paraben"; products may specifically say "paraben free."
- Ethanolamines** → EDCs used in the production of detergents and personal care products. Listed as "monoethanolamine" (MEA), "diethanolamin" (DEA) and "triethanolamine" (TEA).
- Antimicrobials** → EDCs that kill or inhibits the growth of microorganisms; used in soap, toothpaste and clothing; products may say "anti-bacterial"; some antimicrobial compounds/trade names include "triclosan", "triclocarban", "Microban®"
- AP-based Surfactants** → EDCs. Alkylphenol ethoxylates (APEs) are a class of synthetic compounds that act as non-ionic surfactants. Listed as "nonylphenol monoethoxylate" (NP1EO), "nonyphenol diethoxylate" (NP2EO), "octylphenol" (4-TOP) and "nonylphenol" (4-NP)
- Dichlorobenzene** → MC used for mothballs and disinfectant for toilets, garbage cans, and diaper pails. Listed as "1,4-dichlorobenzene" or "para-dichlorobenzene" or "14DCB"
- Lavender or Tea Tree** → A study suggests repeated topical use of products with lavender and/or tea tree oil may cause prepubertal gynecomastia, a rare condition resulting in enlarged breast tissue in boys prior to puberty. May be listed in ingredients list.
- Estrogen/Placental** → Hormones found in cosmetics, mainly anti-wrinkle face creams and hair products marketed to African American women. May be listed in ingredients list.
- Stain Resistant** → Perfluorinated Compounds (PFCs) are used to make stain resistant coatings such as on pans and clothing. Product may say "stain resistant"; look for compounds starting with "perflouro..." e.g.: Scotchguard®, Teflon®

## Difficulties Encountered

- Ingredients were presented with different names, e.g.: "monoethanolamine" could also be written as "MEA"
- Labels took a minimum of five minutes to read through.
- Some ingredient lists were illegible because of very small print or the customer had to look through the product to read the label inside the bottle.
- Some products did not have an ingredient list.
- Many products did not specifically indicate that all ingredients were listed so it was possible that some ingredients were left out.
- Some products had a huge amount of eco claims that customers may not have the time to read through to search for substantial claims.
- Many eco claims made the product appear eco friendly but had little meaning or small words were added to claims to make their meanings insignificant, e.g.: "No harsh chemicals" ("harsh" can be defined different ways), "Awakens your skin to a fresh new day" (has little meaning and makes scanning labels wearisome)



## Conclusions

- Incomplete labeling → uncertainty
- Cleaning product prices are comparable between alternative and conventional
- Just because a product is found in an alternative store does not mean it meets the criteria, vice versa
- Label reading was long and difficult
  - Products need to disclose all ingredients and be tested for safety

## What Can You Do?

- Use fewer products
- Make your own products and advocate for full disclosure of ingredients on labels. See Women's Voices for the Earth [www.womenandenvironment.org](http://www.womenandenvironment.org)
- Encourage companies to sign the Compact for Safe Cosmetics [www.safecosmetics.org](http://www.safecosmetics.org)
- Support policies that require testing products and ingredients for safety before they are put on the market
- Become a Facebook fan of Silent Spring Institute Campaign for Safe Cosmetics:
  - Goal: To advocate for smarter laws that protect our health from toxic chemicals and encourage innovation of safer alternatives.
  - Compact: Companies promise to remove chemicals linked cancer, reproductive harm, neurotoxicity and endocrine disruption and replace them with safer alternatives

*"... the right of the citizen to be secure in his own home against the intrusion of poisons applied by other persons. This should be one of the basic human rights."*  
 --Rachel Carson, 1962



Aliyah Cohen and Zoe Schacht-Levine  
The Long Island Teens

