Clean Label Consumers and their Perceptions on Flavors.

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Bell Flavors & Fragrances

SENSORY INSIGHTS

- Integrates sensory properties and consumer needs
- Guides and validates creative development and innovation

RESEARCH

CONSUMER ADVOCATE

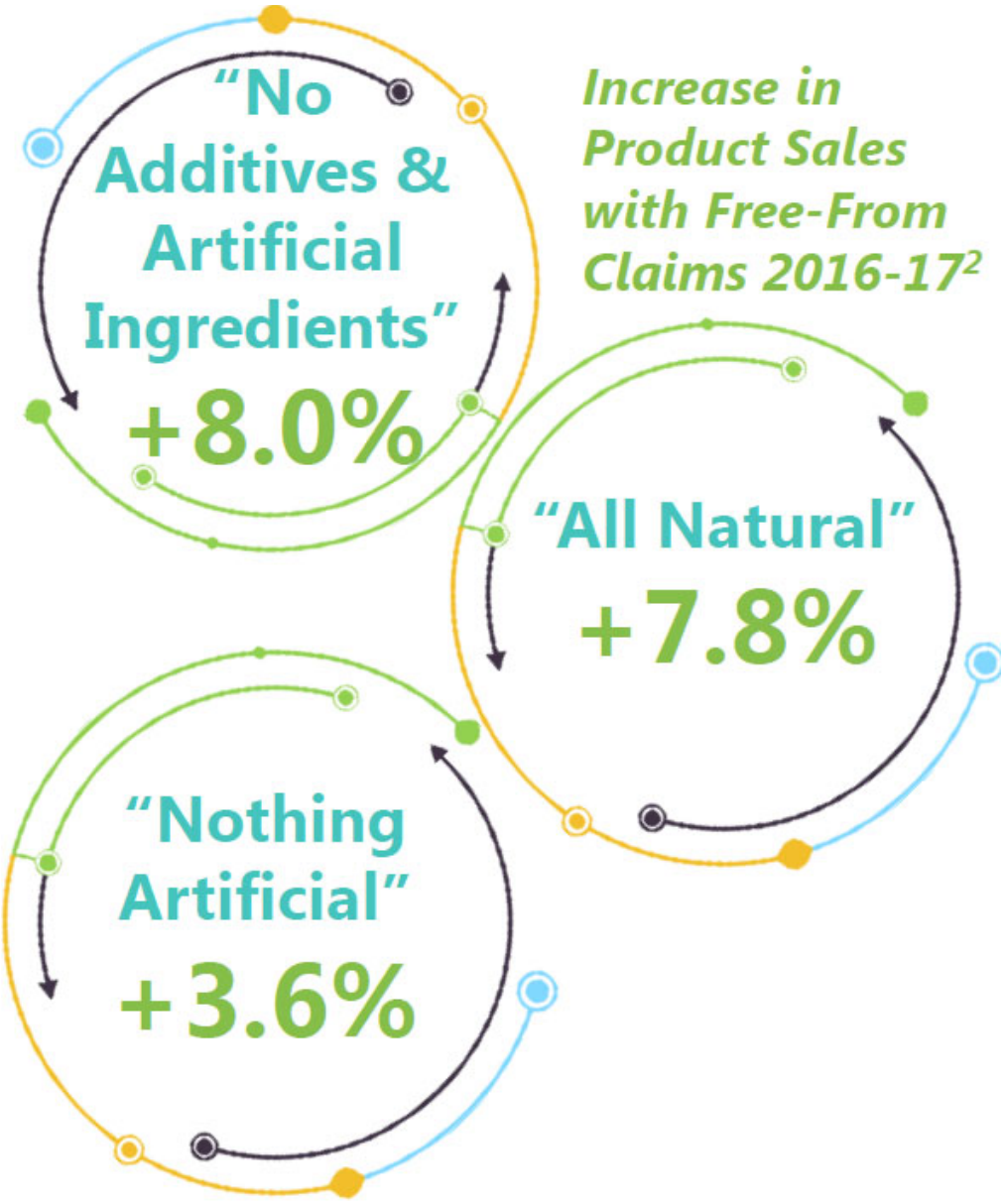
CONSULTING SERVICES

Why Clean Label?

2015
$165B

2020
$180B

Projected Global Sales for Clean Label Products (in US$)[1]



[1] Food Insider Journal 2017: https://www.foodinsiderjournal.com/clean-label/75-consumers-will-pay-extra-clean-label-ingredients

[2] Report by the Neilson Company (2017) It's Clear: Transparency is Winning in the U.S. Retail Market

What is a Clean Label?

YouTube

VIDEO.MOV

Source: The Natural Effect Video Youtube.com by Only Organic

When Food Companies Say "Clean Label," Here's What Consumers Understand

"Clean label" is a term that's not part of consumers' everyday vocabulary. "Clean" encompasses much more than what's listed (or not listed) on a product's ingredient label. While the food and beverage industry has latched onto the term, consumers approach the concept from a distinct perspective.

The Contemporary Consumer Meaning of "Clean"

Consumers continue to look for the hallmarks of fresher, less processed foods and beverages.

When shopping:

65% of consumers say they look for food and beverages that **have the shortest list of ingredients**

58% of consumers say they look for food and beverages that **contain only ingredients I recognize**

As with natural and less processed products, consumers expect "clean" foods to be self-evident. This is what "clean" means today:

Uncontaminated.

The heart of clean heavily overlaps perceptions of natural, organic and less processed: simple, not interfered with, free from "impure" additions at any stage (made simply, grown naturally).

Transparent.

Clean also connotes a product that is both knowable and forthcoming about its ingredients and practices.

The Building Blocks of "Clean Label": How Consumers Evaluate Whether a Product Is "Clean"

Consumers evaluate multiple attributes to determine if a product meets their criteria for "clean label." Terms such as authentic, real, simple, clean and fresh are often used interchangeably by consumers. They look to a number of cues to determine whether a product encompasses these ideals – specifically:

- WHAT'S IN IT?
- HOW WAS IT MADE?
- WHO MADE IT?

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Source: Health + Wellness 2017 report, The Hartman Group

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What is a Clean Label?

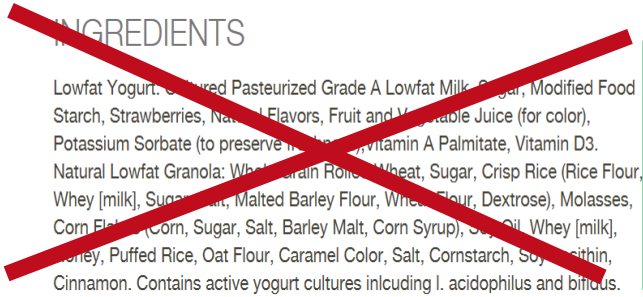
Proposed definition adapted from D. Asioli literature review (2017) :

INFERRING

FOUCS ON CLAIMS

INSPECTING

FOUCS ON INGREDIENT LINE



Ingredients: Cultured Grade A Reduced Fat Milk, Food Starch.

Contains Active Yogurt Cultures Including L. Acidophilus

Source: Asioli, Daniele. , et al. (2017). Making sense of the ‘‘clean label’’ trends: A review of consumer food choice behavior and discussion of industry implications. Food Research International, 99, 58-71

In Market Examples

Ingredients: Popcorn, Sunflower Oil, & Salt

In Market E

In other cases, l duct and the new product

- Diet

Natural Color

Clean Label Expectations are **Category and Brand Specific**.

And Dependent on **Usage Occasion**.

Cargill White Paper identified **Baked Sweet Goods** as a category where ingredients are not as important to Clean Label Consumer.

[1] Source: E. Watson. FoodNavigator.com Article (August 2018) "Common Sense with Clean Label In Conversation with Otis Spunkmeyer".

[2] Source: Cargill White Paper (2017), Transparency and Simplicity: The New Normal in Product Development.

Questions…..

What do Clean Label Consumers think about flavor ingredients?

Who are Clean Label Consumers?

What types of Flavors are permissible in baked sweet goods ?

Objectives

1. Identify Clean Label Enthusiast demographics, behaviors and attitudes.

2. Understand Clean Label Enthusiast perception on claims and a variety of flavor types for bakery items in the breakfast and snacking/indulgent occasion.

Flavor Types:

- Artificial Flavor
- Natural Flavor
- Natural Flavor with other Natural Flavors
- Natural & Artificial Flavor
- Organic Flavor
- Organic Certified Flavor
- Non-GMO Flavor

Bakery Items:

- Muffins
- Sweet Rolls
- Cinnamon Rolls
- Coffee Cakes
- Snack Cakes
- Cookies
- Pies
- Donuts
- Danishes
- Regular Cake
- Scones

Research Approach

All research was conducted with Insights Now Clean Label Enthusiast Online Community in a web-based collaborative environment.

Who are Clean Label Enthusiasts?

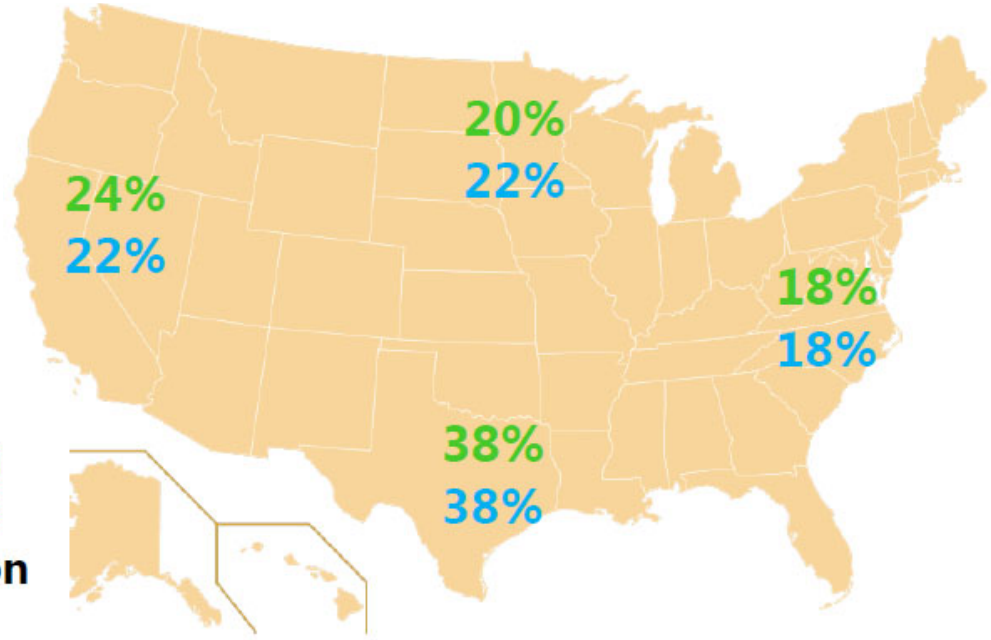
- Majority Boomers (41% of CLE and born between 1946-1964)
- 49% have households with children between the ages of 6-12
- Skews towards Females (61% Female, 39% Male)
- 79% of Females do most/all of the household shopping
- Not as prevalent in the lowest economic bracket

  → 18% in <$25,000 annual income

CLE = Clean Label Enthusiast
Source: 2017 Insights Now CLE Food Behavior Report

Clean Label Enthusiasts (CLE) comprise of 16% of the US population of primary grocery shoppers; this number is growing.

CLE geographical distribution is similar to non-CLE consumers and skews higher in the south.



CLE = Clean Label Enthusiast
Source: 2017 Insights Now CLE Food Behavior Report

Clean Label Enthusiast Purchase Decisions

CLE = Clean Label Enthusiast

Source: 2017 Insights Now CLE Food Behavior Report

Clean Label Enthusiast Purchase Behavior

58%
Fresh, Not Frozen, Produce

25%
Avoid Sweet Snacks

33%
Avoid Lunch Meats

CLE = Clean Label Enthusiast
Source: 2017 Insights Now CLE Food Behavior Report

Number of Stores Shopped for Specific Foods/Beverages

Clean Label
Enthusiast
Average 4 Stores

Non-Clean Label
Enthusiast
Average 3.1 Stores

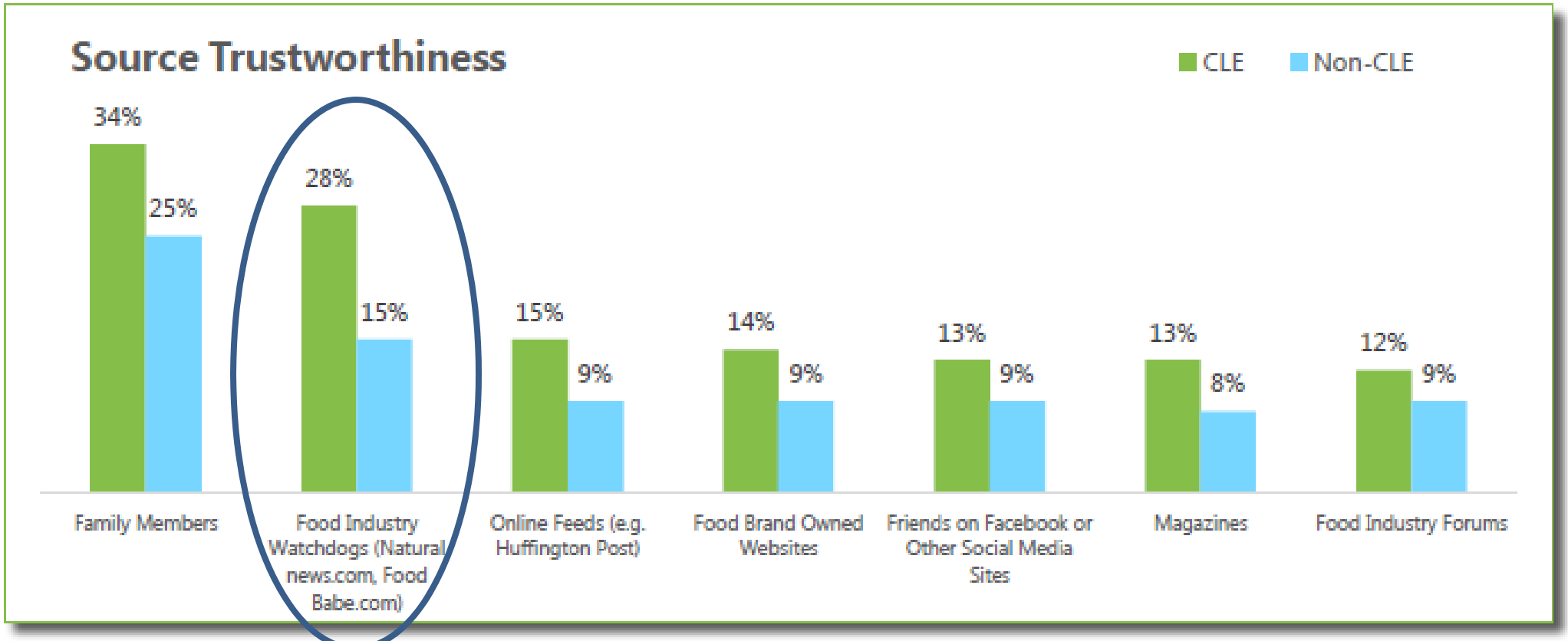
WHOLE FOODS MARKET

TRADER JOE'S

COSTCO WHOLESALE

CLE = Clean Label Enthusiast
Source: 2017 Insights Now CLE Food Behavior Report

Clean Label Enthusiasts trust family members and Food Industry Watchdogs over CPG brands.



CLE = Clean Label Enthusiast
Source: 2017 Insights Now CLE Food Behavior Report

Phase 2: Online Survey

CLEAN LABEL ENTHUSIASTS™
An InsightsNow Community

Participants (n=254) were screened based on purchase history of items from each occasion.

Completed Survey: Perception on Claims & Flavor Ingredients

CLE members were invited to complete an ingredient survey on 2 occasions , 11 product types, & 7 flavor ingredients.

2 Occasions: Breakfast & Snack

Thinking about a typical/normal **BREAKFAST** at home before heading out for the day, when are you eating a **MUFFIN**, how do you feel about the following ingredient:

NATURAL FLAVOR

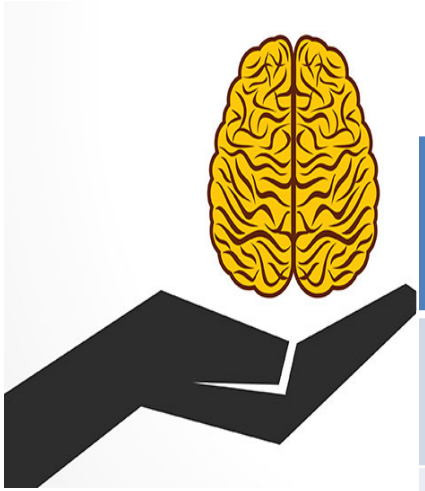
OK **AVOID**

Participants were instructed to select "OK" or "Avoid" to describe their feeling toward each ingredient tested.

Analyzed Data
Bakery Breakfast: n = 105
Bakery Snack / Indulgence: n = 104

Clean Label Score

Clean Label Score™



Response Matrix	Slow Response	Fast Response
Avoid		
OK		

Clean Label Score Formula

$$\left[\left[\sum [\text{Cell}(i) \times \text{Weight}(i)]\right]/2\right] + 50$$

Natural, Organic, GMO Free, Clean Label & Convenient are meaningful claims for Clean Label Enthusiasts for Breakfast and Snack bakery items.

BREAKFAST BAKERY ITEMS cookies, cakes, pies or baked goods	(n = 105)
Claim Influence	
Natural	60%
GMO Free	52%
Clean Label	47%
Organic	45%
Convenient	43%
Authentic	36%
Low Salt	35%
Trans Fat Free	33%
Value - Lowest Cost	32%
Pure	30%
Low Fat	30%
Easy to Make	30%
Low Calorie	27%
Gluten Free	21%
Preferred 2:1	7%

SNACK/INDULGENT BAKERY ITEMS cookies, cakes, pies or baked goods	(n = 104)
Claim Influence	
Natural	56%
Organic	48%
Clean Label	48%
GMO Free	44%
Convenient	40%
Trans Fat Free	38%
Low Fat	38%
Low Calorie	34%
Low Salt	31%
Authentic	29%
Value - Lowest Cost	28%
Pure	27%
Easy to Make	26%
Gluten Free	19%
Preferred 2:1	9%

Q. Which of the following claims MOST INFLUENCE which products you choose when you are shopping for….

Clean Label Enthusiasts believe Natural Flavors and, to a lesser extent, Natural WONF Flavors are appropriate for breakfast bakery items.

BREAKFAST BAKERY ITEMS Clean Label Score	(n = 105)
Natural Flavor	89.0
Organic Flavor	84.8
Organic Certified Flavor	83.1
Natural Flavor with Other Natural Flavors	80.2
Non-GMO Flavor	73.1
Natural & Artificial Flavor	53.3
Artificial Flavor	27.1

Non-GMO Flavors are not critical to the breakfast bakery category.

BREAKFAST BAKERY ITEMS Clean Label Score		
	Donuts (n = 31)	Muffins (n = 25)
Natural Flavor	89.5	91.0
Organic Flavor	83.1	90.0
Organic Certified Flavor	73.4	90.0
Natural Flavor with Other Natural Flavors	79.8	83.0
Non-GMO Flavor	69.4	82.0
Natural & Artifcial Flavor	62.1	55.0
Artificial Flavor	46.8	14.0

When looking at Donuts and Muffins, Natural Flavor continues to have the numerically highest Clean Label Score.

Organic Certified and Non-GMO Flavors appear to have an increased importance for Muffins (vs. Donuts).

CLE feel Natural & Artificial Flavor is more appropriate in Donuts than in Muffins.

Gluten Free Lemon Poppy Seed Muffin

Ingredients: eggs, buttermilk (buttermilk (cultured fat-free milk, modified cornstarch, salt, carrageenan, pectin, vitamin D3) , canola oil, rice flour, brown sugar, sugar, tapioca starch, potato starch, poppy seeds, turbinado sugar, lemon zest (lemon peel, cane sugar, natural lemon flavor), baking powder (sodium acid pyrophosphate, bicarbonate soda, cornstarch, monocalcium phosphate), baking soda, salt, xanthan gum.

Source: www.WholeFoodsMarket.com

Clean Label Enthusiasts believe Natural and Natural WONF Flavors are appropriate for snack/indulgent bakery items.

SNACK/INDULGENT BAKERY ITEMS Clean Label Score	(n = 104)
Natural Flavor	88.6
Organic Flavor	84.0
Natural Flavor with Other Natural Flavors	80.1
Organic Certified Flavor	76.7
Non-GMO Flavor	72.1
Natural & Artifcial Flavor	53.9
Artificial Flavor	24.3

Non-GMO flavors are not critical to the snack bakery category.

Natural Flavor is acceptable for Clean Label Enthusiasts in Cookies, Donuts, and Muffins when eaten as a snack/indulgent treat.

SNACK/INDULGENT BAKERY ITEMS Clean Label Score			
	Cookies (n = 27)	Donuts (n = 22)	Muffins (n = 19)
Natural Flavor	85.2	87.5	86.8
Organic Flavor	83.3	86.4	84.2
Natural Flavor with Other Natural Flavors	85.2	75.0	78.9
Organic Certified Flavor	76.9	79.5	76.3
Non-GMO Flavor	75.9	76.1	61.8
Natural & Artifcial Flavor	43.5	67.0	59.2
Artificial Flavor	24.1	26.1	13.2

Natural WONF is also appropriate for Cookies, Donuts, and Muffins.

Natural & Artificial Flavor is most acceptable in Donuts.

INGREDIENTS: Flour Blend (Brown Rice, Sorghum and Buckwheat), Brown Sugar, Semisweet Chocolate Chips (Cane Sugar, Unsweetened Chocolate, Cocoa Butter), Concentrated Fruit Juices (Pear, Grape), Date Paste, Safflower Oil, Water, Brown Rice Syrup, Natural Flavors, Leavening (Baking Soda), Salt, Vanilla Extract, Xanthan Gum, Konjac Gum, Rosemary Extract

INGREDIENTS:

UNBLEACHED ENRICHED FLOUR (WHEAT FLOUR, NIACIN, REDUCED IRON, THIAMIN MONONITRATE, RIBOFLAVIN, FOLIC ACID), POWDERED SUGAR, CANE SUGAR, PALM OIL, SOYBEAN OIL, NATURAL FLAVORS, COCOA POWDER (PROCESSED WITH ALKALI), CONTAINS 2% OR LESS OF STRAWBERRY FREEZE DRIED PIECES, INVERT SUGAR, SEA SALT, BAKING SODA, SOY LECITHIN, AMMONIUM BICARBONATE, COFFEE POWDER.

CONTAINS SOY, WHEAT. MAY CONTAIN TRACES OF PEANUT.

What's Next?

- **Expand learnings to other products categories where Clean Label Consumers pay less attention to ingredients.**

- **Investigate other ingredient types, such as Sweetness Enhancers or Salt Replacers.**

Booth #633

THANK YOU!

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