Issue Two



### Clean Label Research Community Behavior Report: Ingredient Reactions and the Evolution of the Free-From Movement



# insights <u>N@W</u>

#### Welcome to the Clean Label Enthusiasts® Behavioral Report

The free-from food movement is a multi-billion dollar shift in consumer behavior impacting companies within the consumer packaged goods industry. To know how to effectively respond to this movement, InsightsNow has launched a long-term research initiative applying behavioral science to generate insights for faster, more informed clean label decisions. Please read on to find the results of our second report for Q1 2018. **Report Powered By:** 

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An InsightsNow Community

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#### The Free-From Consumer **Product Movement**

More and more consumers are reporting choosing free-from products (e.g. "Gluten-Free, "Nothing Artificial," "All Natural," etc.). Freefrom and organic food product sales in the U.S. has been growing quickly: \$32B in sales in 2016 are expected to grow to \$41.5B by 2021. While some of these free-from trends are driven by nutritional fact, others are the direct result of dissemination of misinformation through social media and unreliable sources.

Free-from describes food products which do not contain ingredients known to cause a reaction for people with food allergies or intolerances. For example, the gluten-free industry is skyrocketing in value despite its ambiguous health effects. This market is currently worth somewhere between \$4 billion and \$10 billion, and it is still climbing, with significant growth year over year in various categories.

The increasing demand for ingredient-free options within foods and beverages has contributed to the growth of free-from, which is set to become the fastest growing category in Asia Pacific, Latin America, Europe and North America with an average of 5.4 percent growth.

<sup>1</sup> http://blog.euromonitor.com/2017/02/free-organic-becomes-fastest-growing-health-wellness-categories-2016.html <sup>2</sup> Report by The Nielsen Company (2017) It's Clear: Transparency is Winning in the U.S. Retail Market.



2016

\$32B

"No



2021

Projected U.S. Sales

for Free-From Food

Increase in

**Product Sales** 

**Products**<sup>1</sup>

#### Who are Clean Label Enthusiasts<sup>®</sup>

Whereas Clean Label Enthusiasts remain at about at 16% of primary shoppers nationally, they comprise up to 24% of primary shoppers in some U.S. markets such as New York, California and the Pacific Northwest. This information is based on a sample of 7,526 US primary shoppers who completed an online survey between October 2017 and March 2018.

CLE shoppers are more apt to read ingredient labels, exhibit concerns about too many chemicals in foods, and avoid foods and brands using ingredients they perceive as unhealthy.



CLE shoppers show little or no difference in age or household size from the general population. However, CLE tend to have completed post-high school education. As will be shown in this report, these concentrations reflect changing influences for clean label claims and respective ingredient reactions.



#### Differences in CLE with Regard to Level of Education



#### Shopping Behavioral Differences: CLE vs. Non-CLE

The food behavioral profile of a CLE is distinctly different from other consumers. They tend to frequent a higher proportion of both national retainers that offer value add (clean label) brands, and local stores. Non-CLE tend to shop more frequently at value chains such as Family Dollar, Dollar Tree, Dollar General and Wal-Mart.

In addition, they exhibit distinct differences in what influences their shopping choices and the tradeoffs they make.

### 80% of CLE

will trade away "amazing taste" for ingredients they will trust *Compared to 51% non-CLE*  \*extremely careful" about foods I eat (avoiding "bad" ingredients) Compared to 15% non-CLE

Comparisons of Where Clean Label Enthusiasts Shop



**85%** of CLE

"never or only occasionally" buy products with artificial ingredients *Compared to 50% non-CLE* 



#### **Influential Claims for Beverages**

When shopping for beverages, CLE seek to a greater degree than other consumers products that are "Natural," "Fresh," "GMO Free," "Low Calorie," "Organic" and "Pure." They are less influenced by "Price/Value" and "Convenience." They are equally brand driven—yet by different brands. The impact of CLE on markets is that these claims now influence all beverage shopping (CLE and Non-CLE combined) for up to 76% of shoppers in some regions such as the NE and to a less degree elsewhere.



#### **Beverages**

#### **Influential Claims for Breakfast Foods**

When shopping for breakfast foods, CLE seek to a greater degree than other consumers products that are "Fresh," "Natural," "Authentic," "GMO Free," "Low Salt," "Organic," "Pure" and "Trans-Fat Free." They are less influenced by price/value and convenience. They are equally brand driven—yet by different brands. The impact of CLE on markets is that these claims now influence all breakfast food shopping (CLE and Non-CLE combined) for up to 89% of shoppers in some regions such as California and to a less degree elsewhere. **Breakfast Foods** 



#### Influential Claims for Desserts

When shopping for desserts, CLE seek to a greater degree than other consumers products that are "Fresh," "Natural," "GMO Free," "Simple," "Low Calorie," "Low Fat" "Organic," "Trans-Fat Free," "Pure" and "Authentic." They are less influenced by price/value and convenience. They are equally brand driven-yet by different brands. The impact of CLE on markets is that these claims now influence all dessert shopping (CLE and Non-CLE combined) for up to 82% of shoppers in some regions such as the Desserts NE and to a less degree elsewhere.



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#### Influential Claims for Lunch or Dinner Foods

When shopping for lunch or dinner foods such as soups, CLE seek to a greater degree than other consumers products that are "Fresh," "Natural," "GMO Free," "Simple," "Organic," "Trans-Fat Free," "Pure" and "Authentic." They are less influenced by price/value and convenience. They are equally brand driven—yet by different brands. The impact of CLE on markets is that these claims now influence all lunch or dinner shopping (CLE and Non-CLE combined) for up to 86% of shoppers in some regions such as the NE and to a less degree elsewhere.



Lunch or Dinner Foods

#### **Influential Claims for Snacks**

When shopping for snacks, CLE seek to a greater degree than other consumers products that are "Natural," "GMO Free," "Organic," "Trans-Fat Free" and "Authentic." They are less influenced by price/value and convenience. They are equally brand driven—yet by different brands. The impact of CLE on markets is that these claims now influence all snack food shopping (CLE and Non-CLE combined) for up to 63% of shoppers in some regions such as the NE and to a less degree elsewhere.



Snacks

#### **Sustainability**

Various kinds of sustainability are a concern by CLE more so than other consumers. Key sustainability issues are farming practices including animal welfare, the manufacturing and use of packaging materials and to a lesser degree fishing and business practices. These farming or packaging sustainability concerns influence purchase behavior for up to 41% of all shoppers (CLE and Non-CLE combined) in California and to a lesser degree in other U.S. regions.





#### Key Learnings About the Free-From Movement

Clean Label Enthusiasts<sup>®</sup> (CLE) are primary shoppers, predominantly women who do most if not all of food shopping for their households. They are forward thinking consumers underlying the free-from movement with specific ingredient concerns. This second quarterly report highlights regional differences, the importance of ingredient trust, the influence of free-from claims and the emerging impact of sustainability concerns.

#### Point 1 – Regional Differences

CLE comprise up to 24% of primary shoppers in some US markets. This behavioral segment is very similar in demography throughout the US with a slight skew to a greater chance to have started or completed some level of higher education. CLE are lowest in some states of Midwest such as Oklahoma and lowa.

#### Point 2 - Ingredient Trust

The Free-From Movement influences the retail stores where people shop and what brands they buy. CLE primary shoppers read ingredient labels and will trade away great taste for a cleaner label with ingredients they trust.

#### Point 3 – Free-From Claims

The impact of the Free-From Food Movement is strongest on food buying behavior on the west coast, the NE, and in major markets such as Texas and Florida. The influence of claims for "Authentic," "Natural," "GMO Free" and "Organic" impact all food and beverage categories. "Fresh" and "Pure" claims are important to influencing buying behavior in all food categories except snacks. In addition, "Low Calorie" is important in beverages and desserts; "Low Salt" in breakfast foods; and "No Trans-fat" in lunch/dinner foods, desserts and snacks.

#### Point 4 – Sustainability

Sustainability is an emerging influence in buying behavior driven by concerns associated with farming practices including animal welfare, manufacturing practices and use of non-sustainable packaging materials. These concerns are important in 2 of 3 CLE

> shoppers. California leads the US with an overall impact of sustainability concerns influencing 41% of all consumers (CLE and Non-CLE).

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#### **Influence of Ingredients on Shopping Behavior**

In looking at the major categories of food ingredients as might be shown on an ingredient statement, there are two major and one minor difference in influence between CLE and Non-CLE shoppers. CLE shopping behavior is more influenced by the presence or absence of artificial ingredients and preservatives and to a lesser degree by sugar.

"Salt/Sodium," "Fat" and "Carbohydrate" to a lesser degree are a concern of both CLE and Non-CLE with a lower % CLE listing this as a concerns.

As expected, very few consumers view protein as a concern as there are obviously more benefits associated with protein.





#### **Clean Label Score**

To assess the influence of specific ingredients as might be listed on a back label, our team developed an ingredient scoring process. This process involved CLE community members rating ingredients via an implicit test where they scored an ingredient "OK" or "Avoid" within the context of a typical food they buy for a given moment. We also timed how long it took participants to respond.



For every participant we estimated a cutoff time for what was a fast or slow response. This was done by having them first pick 3 numbers between 1 and 9—respond to seven implicit questions (Yes or No) whether presented number was one of the selected numbers; and, then pick 3 colors from pallet of 7 respond to seven implicit questions (Yes or No) whether presented color was one of the selected colors. We dropped the first response as it tended to be biased to a longer response and selected the 90<sup>th</sup> percentile time as their fast cut off time. From this we calculated the counts and percentages across the following response matrix, and from this matrix a 100 Point Clean Label Score was





#### Scoring Ingredient Categories for Contribution to a Clean Label

Through March 2018 we have built an information base of Clean Label Scores on ingredients from seven ingredient categories from food products purchased for use moments in five food categories. The lowest average Clean Label Scores came from the sweeteners and baking ingredients. Flavorings received the highest average scores, significantly different within the Lunch/Dinner (Soups) food category. Colorants, texturants, acidulants, and fat/fat replacers were scores lower in varying degrees.

#### Lunch & Dinner Soups: Average Clean Label Scores Over Ingredients within Ingredient Categories



Ingredient categories with the same letter and not statistically significant (95% confidence).

There is more information at present to gain insights into how Clean Label Scores vary for flavorings and sweeteners across food categories. Therefore, what follows will be a deep dive into these two ingredient categories.



#### **Scoring Flavorings for Clean**

Labeling ingredients as "Natural" and to a lesser degree "Organic" resulted in the highest Clean Label Scores from the CLE community. Use of "Natural and Artificial" was significantly lower, but significantly higher than "Artificial" alone.

"Vanillin" and "Butter Flavor" were scored in the same significance group as "Natural and Artificial" indicating these ingredient names are perceived as somewhat artificial.

There is also evidence that including a name that suggest some "additional processing" will lower the Clean Label Score. "Dehydrated Garlic" was rated significantly lower than "Garlic Power."



Overall Mean Score: 70.37; Unique Respondent Count: 105-253 of 306



#### **Scoring Flavorings Across Food Product Categories**

"Natural" and "Organic" flavors were perceived as more clean across all food categories with "Natural and Artificial" receiving significantly lower scores (95% confidence).

Ingredients trade-offs for bakery products were found with "Natural & Artificial" and "Artificial Flavor" scores higher on donuts.



#### Bakery Product Scores: Tradeoffs



Sea Salt Natural Chicken Flavor Organic Chicken Flavor Smoked Sea Salt Potassium Salt Sodium Chloride Disodium Guanylate Disodium Inosinate Overall Mean Score Unique Respondent Count P-value

So	u	р	S
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88.24 A 78.21 AB 72.73 BC 67.25 С 38.24 D 26.07 Ε F 11.50 F 11.10 49.16 187 < 0.0010

Within the Soup category, flavorings received the highest scores when using "Organic," "Natural" or naming to achieve an impression of natural (e.g. "Sea Salt").

Chemical sounding names received the lowest scores. This includes naming salt as "Sodium Chloride" which was significantly lower that "Sea Salt" and "Smoked Sea Salt." it also includes all the flavor enhancers ("Disodium Guanylate" and "Disodium Inosinate").

Ingredients with the same letter are not significantly different (95% confidence).



#### Scoring Sweeteners for "Clean"

On the average over all food categories, "Honey" toped the list of sweeteners as the cleanest sweetener. "Stevia" is included in a group of sweeteners that are perceived as natural such as "Agave," "Monk Fruit" and "Cane Sugar." These are all significantly higher than non-nutritive sweeteners and sweeteners with chemical sounding names (e.g. "Sucrose," "Fructose"). "Corn Syrup" is also listed in the group with lowest scores.

As with flavors, there is evidence that Clean Label Scores are reduced for sweetener names that give the impression of additional processing. "Evaporated Cane Juice" was scored lower than "Cane Sugar" or "Juice Concentrate."



Average Clean Label Scores for Sweeteners Across All Food Categories (Bakery, Beverages, Dairy, Soups and Snacks)



Ingredients with the same letter are not significantly different (95% confidence).

### Scoring Sweeteners Across Food Product Categories

"Honey" consistently received the highest clean label score and "Sucrose," "Acesulfame Potassium," "Sucralose" and "Erythritol" the lowest across the food applications that have been tested to date. However, the clean label scores for "Stevia" and "Cane Sugar" were found to vary considerably. "Stevia" scored highest (70-72) when associated with protein powders, protein bars or protein shakes and as low as 31 for regular yogurt. "Cane Sugar" scored highest (72-75) when associated with snack bars and granola bars and as low as 40 for light yogurt.

These results show the importance of expanding the database of food applications for sweeteners to understand how best to sweeten products and maintain a perceived clean label.



Above box and whisker diagrams show ingredient clean label scores across tested food applications against the range, median and middle 50% range for other tested sweeteners.



#### Impact of Clean Label Scores Based on Where Consumers Shop

The retailers where CLE shop had little impact on how they scored flavorings with respect to being "Natural," "Organic," "Non-GMO" and/or "Artificial." CLE shoppers to frequent Trader Joes scored "Natural" significantly lower than CLE shoppers who frequent Kroger (predominantly in the Midwest) and Wal-Mart. Trader Joes CLE shoppers also scored "Artificial Flavor" lowest among CLE who shop at other major stores.

	Costco	Kroger	Safeway	Trader Joe's	Wal-Mart	Whole Foods
Natural Flavor	84.35 A	91.18 A	82.38 A	77.35 A	90.33 A	81.86 A
Organic Flavor	80.08 A	85.13 A	84.76 A	80.30 A	82.89 A	80.88 A
Natural Flavor with other natural flavors	78.98 A	79.17 A	86.31 A	68.57 A	82.88 AB	81.67 A
Non-GMO Flavor	64.20 AB	76.25 A	68.45 AB	71.43 A	71.88 B	64.58 AB
Natural & Artificial Flavor	48.48 BC	54.25 B	47.38 BC	41.59 B	57.29 C	48.94 BC
Artificial Flavor	34.09 C	31.25 C	35.12 C	23.57 B	26.75 D	32.08 C
Overall Mean Score	66.82	71.43	68.43	61.79	70.03	66.44
Unique Respondent Count	22-41 of 41	30-51 of 51	21-35 of 35	35-55 of 55	100-140 of 140	30-51 of 51
P-value	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010











The retailers where CLE shop had little impact on how they score sweeteners as well, with the exception of some variation with Walmart on sweeteners like "Evaporated Cane Juice."

		Krog	ger	Trade	r Joe's	Wal-M	lart	Whole F	oods
ad	Honey	87.7	87.75 A		84.18 A		87.05 A		7 A
	Agave	66.33	B AB	71.2	2 AB	65.76	В	69.28	AB
	Monk Fruit	74.75	5 AB	67.21	ABC	62.38	В	65.93	AB
	Stevia	56.08	BC	60.65	ABC	62.65	В	65.85	AB
h	Cane Sugar	64.92	2 AB	60.88	ABC	62.23	В	50.74	BCD
	Juice Concentrate	60.42	ABC	53.70	BCD	57.59	BC	44.57	BCDE
	Evaporated Cane Juice	53.57	BC	51.44	BCDE	42.38	CD	55.98	AB
	Sugar	51.19	BCD	46.15	CDE	37.11	DE	52.17	BC
	Acesulfame Potassium	32.50	CD	29.17	DEF	28.71	DEF	27.70	CDE
	Sucrose	34.25	CD	25.08	DF	26.93	EF	20.51	Е
	Erythritol	25.34	D	20.59	F	25.13	EF	26.47	DE
	Sucralose	32.08	CD	19.06	F	24.18	EF	16.42	Е
	Corn Syrup	25.60	D	20.67	F	20.90	F	23.37	Е
	Fructose	25.60	D	21.63	F	20.90	F	22.28	Е
	Overall Mean Score	49.41		45.01		44.34		44.58	
	Unique Respondent Count	24-50	of 60	27-54	of 65	56-138 of 167		23-51 of 59	
	P-value	<0.00	010	<0.0010		<0.0010		<0.0010	

Ingredients with the same letter are not significantly different (95% confidence).



#### Sweeteners by Age and Gender

CLE differences were found in sweetener reaction combinations of gender by age.

In general, younger men and women tended to score natural sweeteners higher. Older men and women reacted much more negative to "Cane Sugar," "Sugar," "Sucrose," non-nutritive sweeteners (especially "Erythritol"), "Fructose" and "Corn Syrup." These effects were more pronounced among women.

These age by gender effects suggest younger CLE shoppers (especially younger women) are more promotional—seeking to use more natural sweeteners; whereas, older CLE shoppers (especially older women) are more protective—seeking to avoid using artificial and non-natural ingredients (especially "Corn Syrup").

		34 or yo	ounger	35 to	54	55 and	older
	Honey	89.8	7 A	84.09	ЭA	84.08	3 A
•	Agave	68.69	BC	68.14	AB	61.99	В
9	Cane Sugar	72.11	AB	63.26	В	51.37	BC
	Monk Fruit	63.08	BC	61.74	В	59.65	В
	Stevia	59.32	BC	54.55	BC	59.65	В
	Juice Concentrate	56.67	BCD	54.27	BC	61.76	AB
	Evaporated Cane Juice	48.61	CDE	40.77	CD	36.36	CD
	Sugar	48.61	CDE	37.50	CDE	29.17	DE
	Sucrose	31.13	DEF	27.40	DEF	18.66	DE
	Acesulfame Potassium	28.99	EF	25.21	DEF	21.35	DE
	Erythritol	29.67	DEF	20.33	EF	15.16	Е
	Fructose	30.56	DEF	22.02	DEF	9.85	Е
	Sucralose	27.60	F	18.18	F	18.84	DE
	Corn Syrup	30.56	DEF	20.83	EF	9.47	Е
	Overall Mean Score	48.	75	42.8	30	38.0	3
	Unique Respondent Count	30-72	of 95	41-99 o	f 119	34-73 o	of 89
	P-value	<0.00	010	<0.00	)10	<0.00	10

< 0.0010

P-value

<0.0010

women	34 or y	ounger	35 to	54	55 and	older	Men	34 or yo	34 or younger		54	55 and c	older			
Honey	92.1	5 A	81.4	0 A	84.8	0 A	Honey	86.49 A		87.60 A		81.51	А			
Agave	73.84	ABC	67.63	B AB	62.87	BC	Juice Concentrate	76.92 #	#<15	62.50	ABC	57.14 #	<15			
Cane Sugar	76.9	4 AB	63.76	5 AB	51.68	BC	Agave	61.06 A	61.06 ABCD 68.80 AB		58.85	AB				
Monk Fruit	62.98	BCD	60.12	ABC	59.80	BC	Monk Fruit	63.22 A	BCD	63.86 AB		59.11	AB			
Stevia	53.59	BCDE	56.85	BC	61.99	BC	Cane Sugar	64.94	ABC	62.60	AB	50.26 A	BC			
Juice Concentrate	41.18	CDEF	49.00	BCD	62.96	5 AB	Stevia	67.82 AB		51.55	BC	51.30 A	BC			
Evaporated Cane Juice	48.08	CDEF	37.23	CDE	37.24	ΒD	Sugar	56.82 A	56.82 ABCD		56.82 ABCD		56.82 ABCD 45.27 BCD		41.18 A	BC
Sugar	41.67	DEF	31.38	DEF	25.00	DE	<b>Evaporated Cane Juice</b>	49.24	BCD	45.27	BCD	33.82	BC			
Sucrose	28.68	EF	23.44	DEF	18.20	DE	Sucrose	34.77	CD	32.56	CD	20.31	BC			
Acesulfame Potassium	26.36	F	22.54	DEF	20.39	DE	Corn Syrup	40.91	BCD	30.41	CD	13.24	С			
Erythritol	28.95	EF	18.38	EF	14.97	DE	Fructose	38.64	BCD	32.43	CD	10.29	с			
Sucralose	24.32	F	8.78	F	18.13	DE	Sucralose	32.47	CD	30.43	CD	21.35	BC			
Fructose	23.72	F	13.83	EF	9.69	Е	Acesulfame Potassium	32.90	CD	28.68	CD	24.74	BC			
Corn Syrup	21.79	F	13.30	EF	8.16	E	Ervthritol	30.71	D	22.87	D	15.83	BC			
Overall Mean Score	46	.72	39.4	45	38.	16	Overall Mean Score	51 54		47 15		37.5	8			
Unique Respondent Count	17-43	of 56	25-56	of 67	27-57	of 68	Unique Respondent Count	13-33 c	of 39	16-43 (	- of 52	7-17 of	F 21			
P-value	<0.0	010	<0.0	010	<0.0	010	enque respondent count	15 55 0		10 45 0		, , , 0	~ .			

Ingredients with the same letter are not significantly different (95% confidence).



< 0.0010

#### Flavorings by Age and Gender

Only age effects were found among CLE shoppers in reactions to flavorings. Men and women reacted with similar Clean Label Scores to flavorings. In general, older men and women reacted much more negative to "Artificial," "Vanillin," and "Natural and Artificial."









Ingredients with the same letter are not significantly different (95% confidence).



#### Sweeteners by Region

There were some regional differences in reactions among CLE shoppers. CLE Clean Label Scores for "Honey" and "Juice Concentrate" were higher and "Fructose" and "Corn Syrup" lower in the Midwest. Juice Concentrate was scored lowest in the South. Monk Fruit received relatively lower scores in the Western Region.

	Midwest		Northeast		South		West	
Honey	90.66 A		86.60 A		87.00 A		78.81 A	
Agave	67.74	BC	67.9	2 AB	65.05	БВ	65.32	2 AB
Cane Sugar	66.45	BC	59.24	BC	60.82	2 B	63.06	5 AB
Monk Fruit	63.43	BC	63.75	ABC	63.87	B	54.66	BC
Stevia	60.70	BC	56.39	BCD	54.35	BC	58.97	' AB
Juice Concentrate	70.19	AB	58.04	ABCD	49.14	BCD	52.27	ABCD
Evaporated Cane Juice	36.50	DE	48.11	BCDE	38.89	CDE	44.64	BCD
Sugar	43.00	ΒD	41.98	CDEF	34.92	CDE	35.71	CDE
Sucrose	25.36	DE	28.61	EF	24.69	DE	25.00	DE
Acesulfame Potassium	27.87	DE	29.58	DEF	23.76	DE	19.63	E
Erythritol	21.27	DE	23.29	F	20.18	Е	21.20	Е
Fructose	14.00	Е	25.47	EF	23.02	DE	21.43	DE
Sucralose	23.35	DE	24.93	EF	18.91	Е	17.73	E
Corn Syrup	16.00	Е	26.89	EF	17.46	Е	22.32	DE
Overall Mean Score	44.4	14	45.	.75	41.5	56	41.	18
Unique Respondent Count	26-58	of 69	28-60 of 76		29-67 of 81		22-59 of 77	
P-value	<0.00	010	<0.0	010	<0.00	010	<0.00	010

Ingredients with the same letter are not significantly different (95% confidence).

South

#### Honey: CLE Sweetener Score by Region



West

#### How Were Black Listed Ingredients Scored?

A number of ingredients tested to generate a Clean Label Score have been banned from stores such as Whole Foods, Kroger, Whole Foods and HEB. In general, these "black listed" ingredients received low scores reflecting their perceptions are "not clean." There are some exceptions. "Citric Acid," a typical acidulant, and "Natural and Artificial" (especially in baked goods and nutritional beverages) received scores over 50—suggesting CLE shoppers are evenly split on whether or not to avoid, and they tend to take more time in considering whether to avoid these ingredients.

This suggests that "Citric Acid" should not be black listed and that even CLE shoppers are open to trade-offs and buy some products that list "Natural & Artificial Flavors" on their ingredient label.

	Bakery (Any)	Beverages (Nutritional)	Breakfast (Dairy)	Lunch/Dinner (Soups)	Snacks (Energy)	
Citric Acid	-	-	-	52.48 A	-	
Natural & Artificial Flavor	52.17 A	50.51 A	46.43 A	-	48.94 A	
Vanillin	-	47.87 A	-	-	-	
Potassium Salt	-	-	-	40.65 B	-	
Lecithin	-	-	-	35.02 BC	-	
Modified Corn Starch	-	-	-	30.29 BCD	-	
Artificial Flavor	27.77 A	-	-	-	-	
Autolyzed Yeast Extract	-	-	-	27.25 CD	-	
Partially Hydrogenated Oil	-	-	-	25.90 CD	-	
Acesulfame Potassium		25.85 B	24.05 B	-	25.98 B	
Acacia Gum	-	-	-	25.23 CD	-	
Xanthan Gum	-	-	-	23.20 DE	-	
Erythritol	-	21.77 B	-	-	21.74 B	
Fructose	-	-	-	21.17 DEF	-	
Sucralose	-	24.06 B	16.90 B	-	20.61 B	
Disodium Guanylate	-	-	-	13.51 EF	-	
Polyphosphates	-	-	-	13.40 EF	-	
Disodium Inosinate	-	-	-	12.16 F	-	
Overall Mean Score	39.97	34.01	29.13	26.69	29.32	
Unique Respondent Count	0-167 of 167	0-147 of 147	0-105 of 105	0-222 of 222	0-165 of 165	
P-value		<0.0010	<0.0010	<0.0010	<0.0010	

Ingredients with the same letter are not significantly different (95% confidence).



#### **Key Learnings About Ingredients**

We are only beginning to scratch the surface to learn about how ingredients influence shopper behavior in the face of the free-from movement. The behavior metric we call a "Clean Label Score" is proving to be a valuable, new way to provide insights for clean label decision making. Whereas we still have a way to go to achieve complete coverage of ingredient Clean Label Scores across all ingredient categories and their respective applications, we are beginning to glean some exciting insights that are important.

#### Point 1 – "Natural" and "Organic" Flavorings

As "Natural" and "Organic" were found important on front panel claims, so are they important influencers within ingredient statements on the back panel. "Non-GMO" as a naming convention for flavors was significantly below "Natural" or "Organic" in Clean Label Score. "Natural & Artificial" was significantly lower yet, but still averaged a score of 50. This means half of CLE shoppers will make trade-offs and accept "Natural & Artificial" flavors for foods such as cinnamon rolls and donuts. "Vanillin" and "Artificial Flavor" received the lowest scores.

#### Point 3 – Age and Age by Gender Differences Among CLE Shoppers

Younger CLE shoppers, especially younger women, appear to be more promotional—with a greater proportion reacting faster to accept more natural ingredients like "Honey," "Agave" and "Cane Sugar." Older CLE shoppers, especially older women, are more preventative—with a greater proportion reacting faster in rejecting artificial sounding ingredients like "Erythritol," "Sucralose," "Fructose" and "Corn Syrup." A similar age, but not age by gender difference was found in reactions to natural vs. artificial flavorings.

#### Point 2 - "Honey" and Natural Sweeteners

#### "Honey" and other more natural source sweeteners

("Agave," "Monk Fruit") received the highest Clean Label Scores. "Stevia," "Cane Sugar," and "Juice Concentrate" were in a second group. "Sugar" was in the next tier down, but significantly higher than "Sucrose," "Fructose," non-nutritive sweeteners ("Acesulfame K," "Erythritol," "Sucralose") and "Corn Syrup." Evidence was found that CLE shoppers will make tradeoffs. "Stevia" varied in score across different types of foods with higher scores protein powders, protein shakes and energy bars.

#### Point 4 – Evidence to Lift Ban on Citric Acid and Natural & Artificial for Some Products

"Citric Acid" (CA) one of the most common naturally occurring acidulants in the world is banned by some retailers. Why? Evidence through this research suggests that with a score of 52 at least half of CLE shoppers accept CA, although after giving it some rational thought. With a score of 46-52, there is evidence that CLE shoppers do accept "Natural & Artificial" flavor, especially for baked goods such as donuts and cinnamon rolls.



#### **Top Non-Food Categories Impacted by Free-From Movement**

The CLE Community rated the importance of clean labels for each of the following non-food categories. These result show that the free-from movement has extended beyond food and beverages. More than 50% of CLE shoppers responded that "clean" is Extremely Important for Home Care, Fabric Care, Oral Care, Body Care, Facial Skin Care or Hair Care products. Over 50% of CLE users of products within the Pet Care and Makeup categories rated clean label to be Extremely Important in their buying decisions.



Non-Food Clean Label Importance - All Results



#### **Top Non-Food Categories Impacted by Free-From Movement**



product users

\*Data excludes participants who do not use products from category

■ Extremely Unimportant ■ Slightly Unimportant

Home Care Fabric Care Body Care Oral Care Facial Skin Makeup



Hair Care Hair Color Air Care

Fine

Fragrances

Care

Nail Care

Pet Care

#### **Breakdown of Clean Label Importance of Non-Food Categories**

#### % of users who think Clean Labels are Slightly or Extremely Important

Top 5 Most Important Non-Food Categories





20% of participants do not use products from the pet care category, yet 58% of participants who do buy from

this category find Clean Labels to be extremely important.

Similar findings were seen for hair color (48% rate Clean Label as extremely important), makeup (52% rate Clean Label as extremely important), and nail color (33% rate Clean Label as extremely important).



#### **Key Learnings About Non-Food Products**

These results show that the free-from movement extends well beyond food and beverage. Having a non-food clean label addresses a key concern to avoid toxicities through use of products that go into your mouth, on your body or in the environment around you. These concerns impact non-food purchase behaviors in that CLE shoppers seek out products that are clean and simple with labels communicating the ingredients within are safe to use. Three key points were gleaned from this research.

#### Point 1: Wish for Clean Labels

**CLE shoppers wish that** all products had clean labels—anything ingested or coming into contact with skin. Key quotes include:

"I think a clean label is important with anything that has the potential to harm someone, whether it's ingested or reacts with skin."

"Clean labels matter for all of these items, but it's hard to miss what you're not used to. Can there ever be a day where all these items have clean labels? I hope so."

#### Point 2: Manufacturer's Response

There is a strong belief that it is a manufacturer's responsibility to provide clean label product. Key quotes include:

"Providing clear, clean and understandable information to the consumer should be a duty of the manufacturers in all areas and products, regardless of their use."

"Unless a company has something to hide, they should support a consumer's right to know."

#### Point 3: Price/Affordability Barrier

**Price is perceived as a barrier** for some CLE shoppers as clean label is perceived as being more expensive. Key quotes include:

"While I wish I could afford clean labels on all of these, right now I have to prioritize which items I can afford to switch to clean and which I can't."



"Some products are more important than others, but I can't justify the price, so I look for alternative homemade products."

#### insights <u>N@W</u>

#### About InsightsNow and the Clean Label Enthusiasts® Community

InsightsNow has a special focus on behavioral marketing research. While we work with a whole spectrum of product types, we especially want to help guide companies trying to engage consumers with healthy living products and practices. Our clients create strategies based on deeper, actionable insights from engaging our custom CLE community and unique behavioral frameworks for interpreting consumer responses.

Clients benefit from work with InsightsNow's community of Clean Label Enthusiasts<sup>®</sup> by gaining new insights on CLE's attitudes, behaviors, or ingredients they avoid. These consumers place a high priority on aligning their purchases with values of personal and planetary health. They are especially aware of ingredients and conscientiously read labels. Thus, companies can better design product attributes that engage or reduce aversion in this consumer segment.

We want to partner with clients in optimizing innovation and marketing so they can meet their customer's needs with the best product for their category and authenticity in their messaging.

Please contact us for more information about this study or to inquire about future research.

Thank you, David Lundahl, Ph.D. CEO InsightsNow Inc.

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