Accounting for Taste: Sensory Cohesion and Product Perception

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Poster #35

INTRODUCTION

The perceptive-hedonic experience of products, routinely, measured with liking scores, can be investigated deeper by collecting emotional responses that can color and even influence the experience. Flavor perception and emotional association can be a barrier to product success. For example, a flavor that is well liked may not be believably "nutritious"; while a flavor that is less liked may negatively impact compliance. Additionally, negative associations may be attributed to a flavor based on the emotions in which it is experienced (e.g. unpleasant hospital experiences).

For the current study, we were challenged to determine consumer acceptance of optimal flavor of a nutritional drink, maintaining compliance and consumer reason to believe for intended benefits (supplemental nutrition).

Research has shown that certain flavor perceptions can be a barrier to usage of these products:
A flavor that scores high on hedonics may be considered to have a flavor that is too "good" to be nutritious
Similarly, a flavor that is considered less appetizing may impact compliance.
Additionally, a negative "halo" effect in this regard could arise from the fact that many users are introduced to these products while recovering from (or while in) a hospital visit/procedure.

Using a 2-phase approach we (SENSANALYSIS & HCD Research) explored both the explicit and implicit consumer product experience to determine which of four fruit flavors were a best fit-to-concept.
-Phase 1 utilized implicit reaction testing for association of test flavors and key concepts (ex: "healthy", "wholesome") and how the product made participants feel (ex: "comforted", "strong").
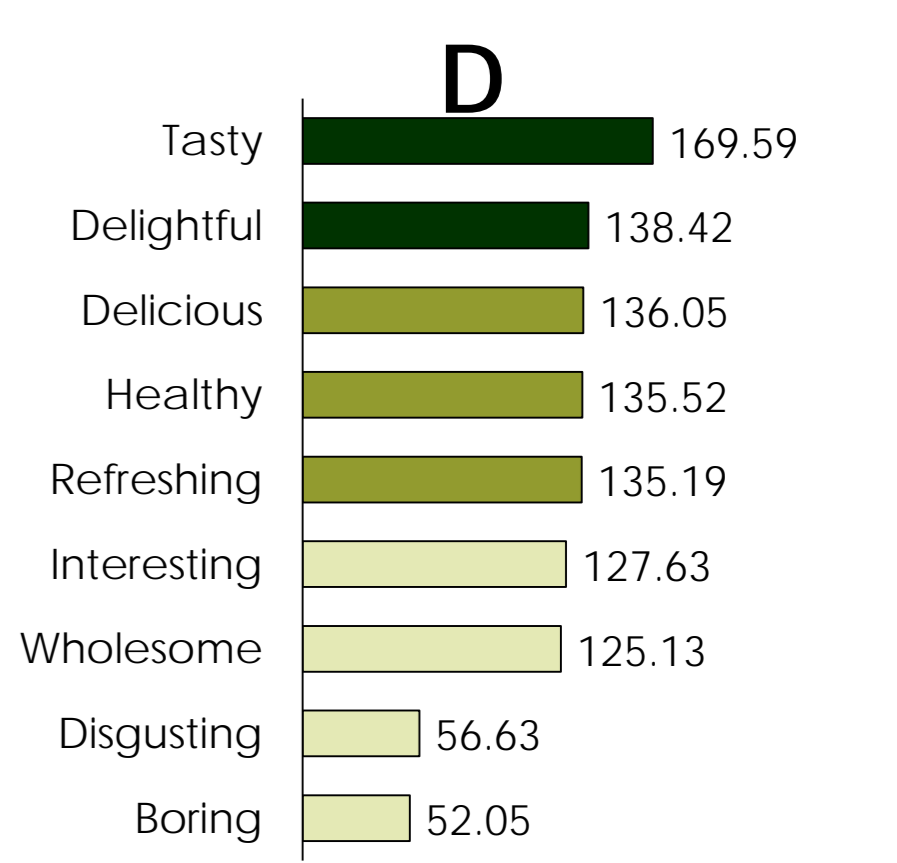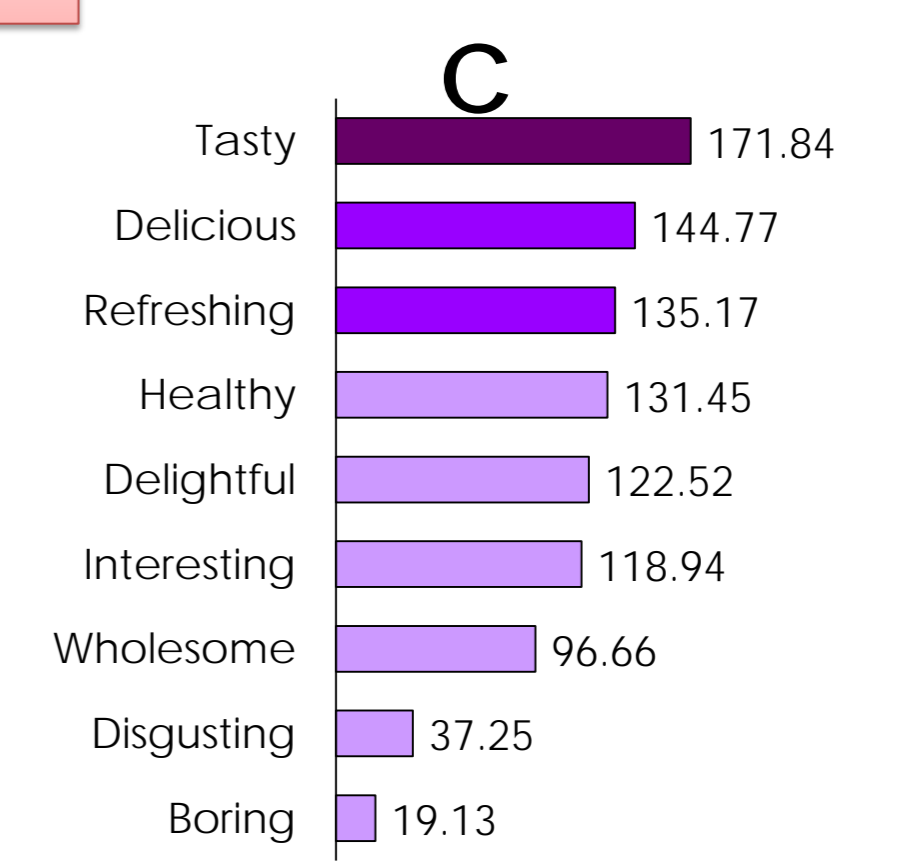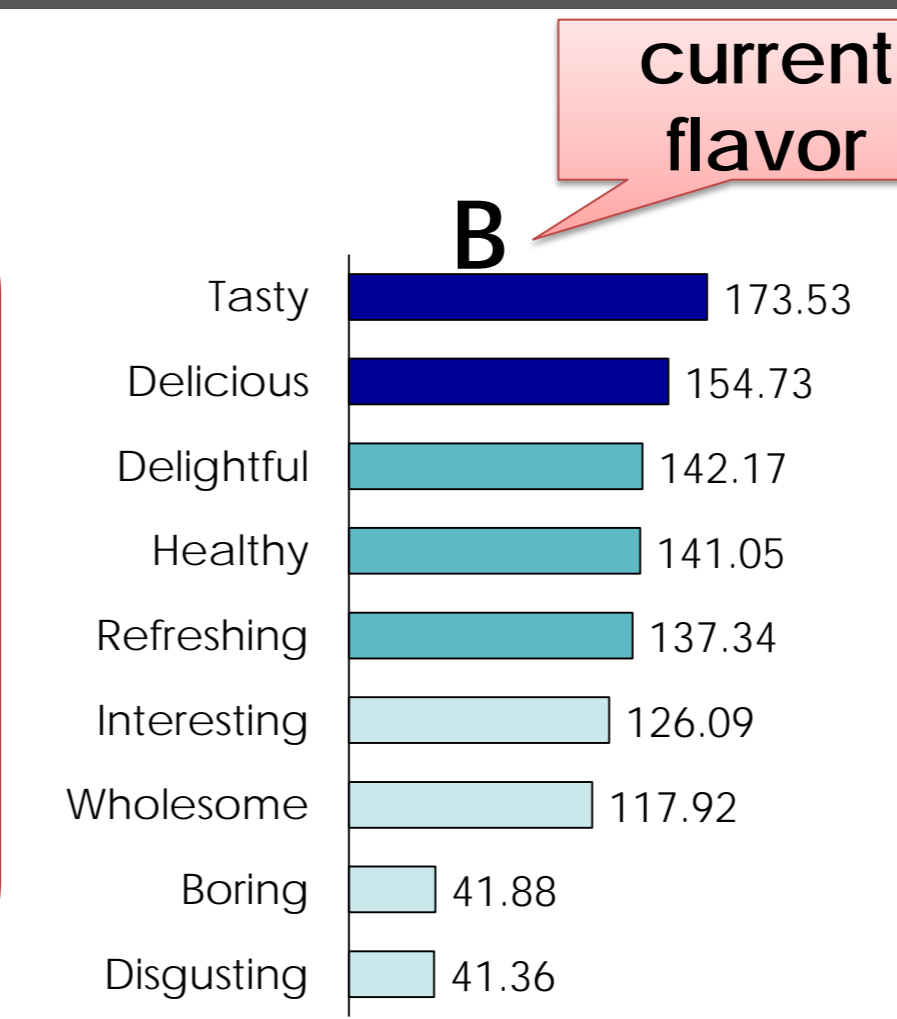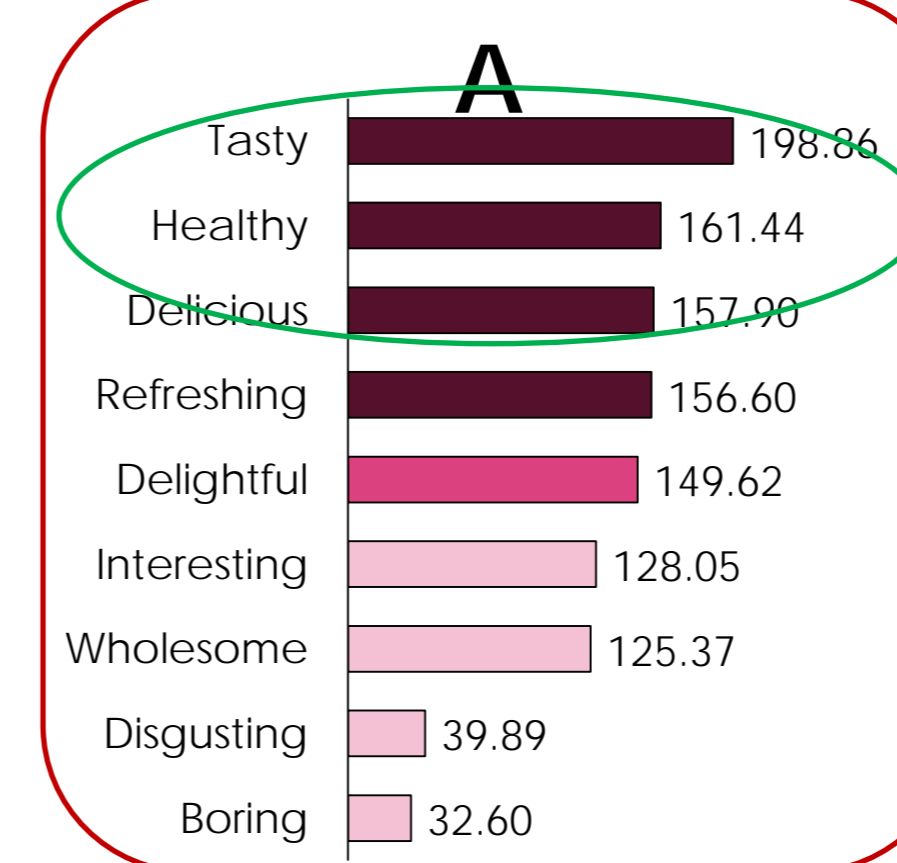-Phase 2 used Sensorial Sessions for in depth qualitative feedback on the participants' thoughts/emotions from individual written exercises.

Results revealed a clear winner among the test samples for both perceptive and hedonic fit to concept as well as provided an in depth look at the consumer emotional and non-conscious drivers which can ultimately influence both the product experience and consumer compliance.
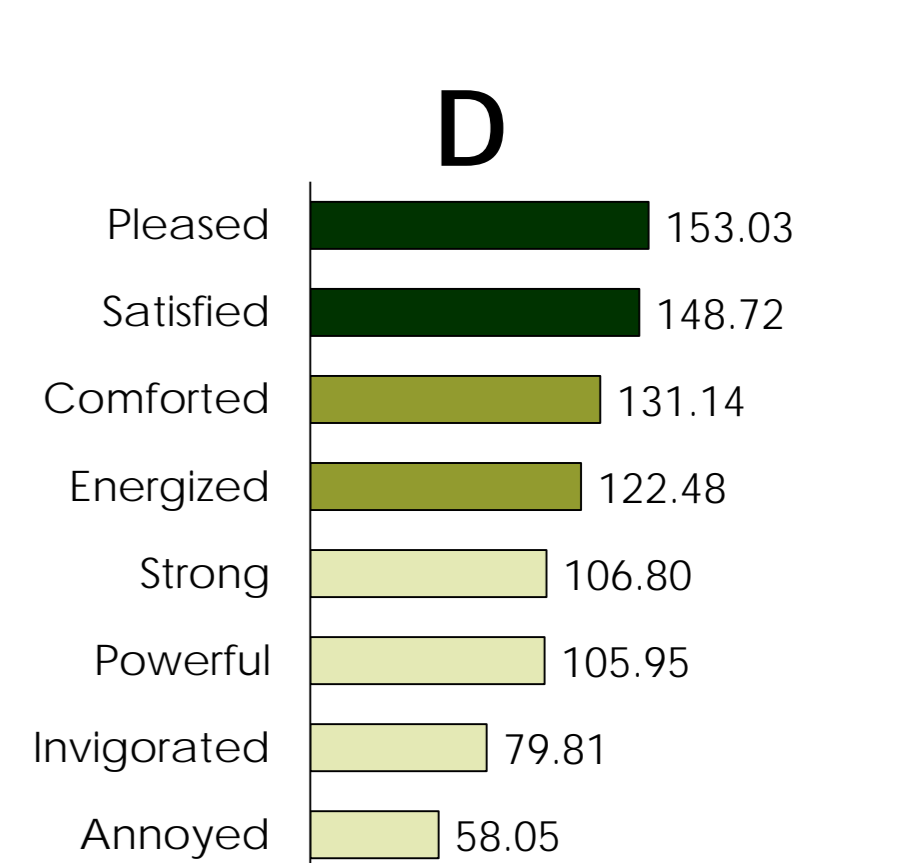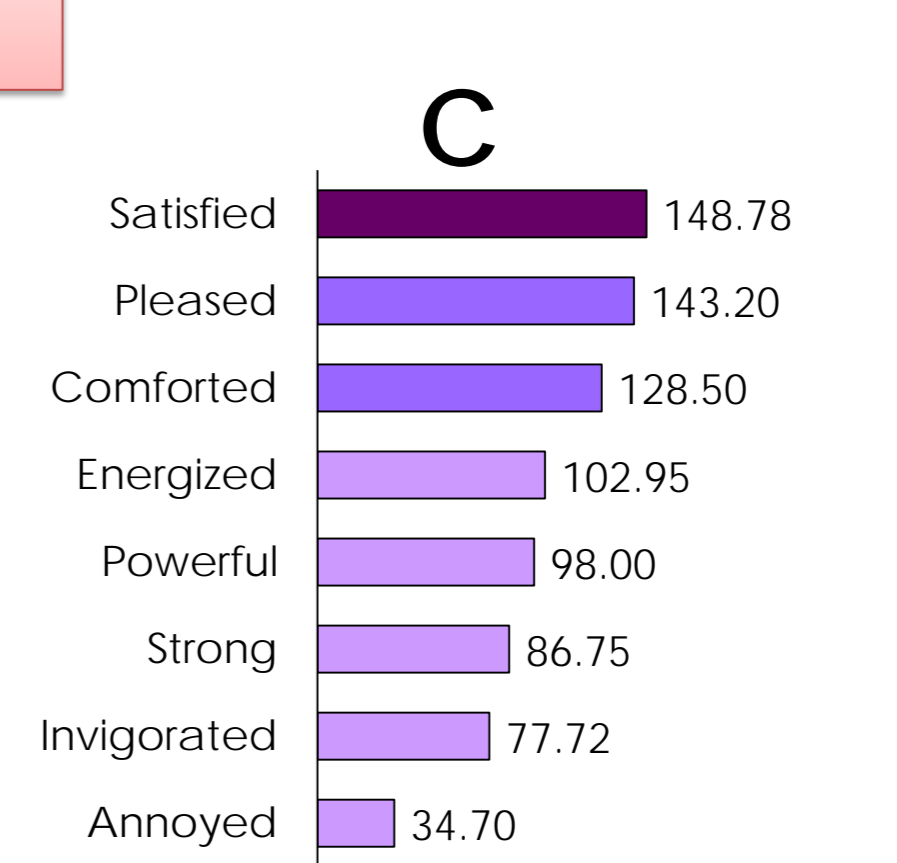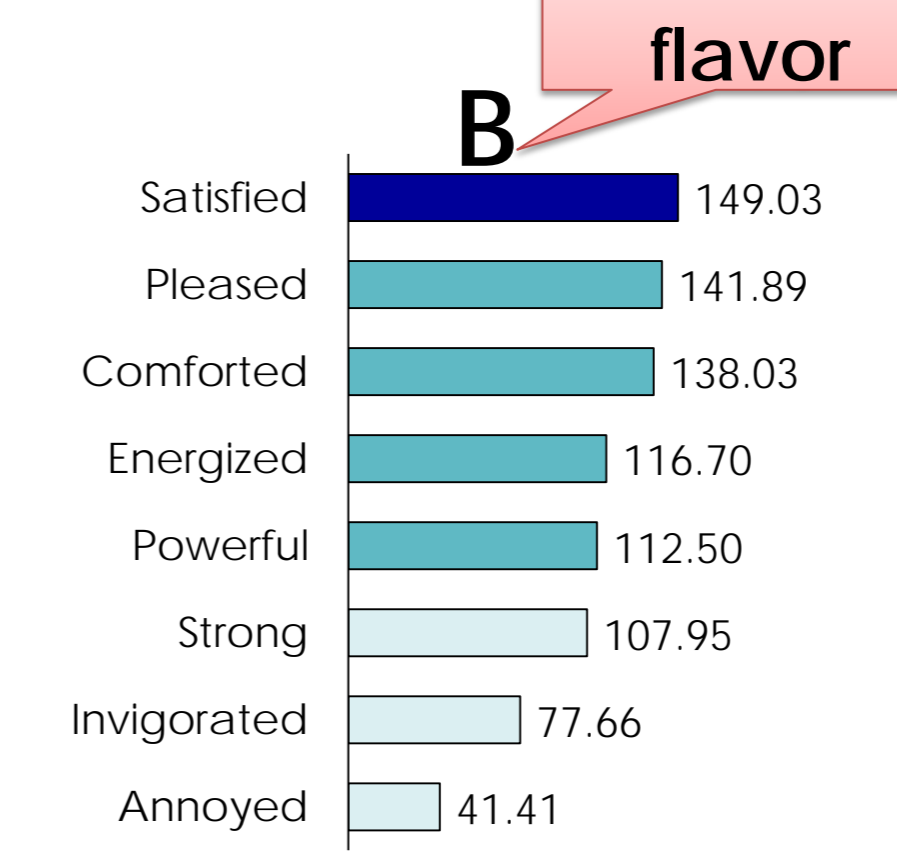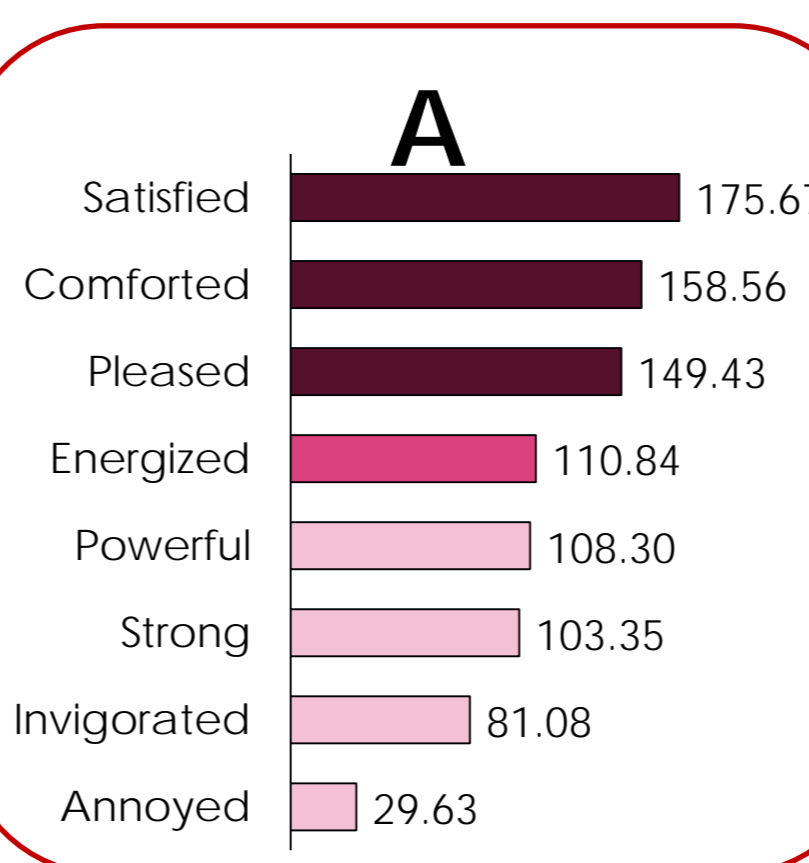
Applied Consumer Neuroscience

Neuro-scientific
The use of modern brain science and neuro tools such as psychophysiological measures

Traditional
Using classical qualitative and quantitative methods of marketing research

Psychological and Behavioral
Using established and validated psychological and behavioral assessments

Phase 1

Associations (Drink Is…)

current flavor

	A		B		C		D
	Tasty 198.86	Tasty 173.53	Tasty 171.84	Tasty 169.59
	Healthy 161.44	Delicious 154.73	Delicious 144.77	Delightful 138.42
	Delicious 157.90	Delightful 142.17	Refreshing 135.17	Delicious 136.05
	Refreshing 156.60	Healthy 141.05	Healthy 131.45	Healthy 135.52
	Delightful 149.62	Refreshing 137.34	Delightful 122.52	Refreshing 135.19
	Interesting 128.05	Interesting 126.09	Interesting 118.94	Interesting 127.63
	Wholesome 125.37	Wholesome 117.92	Wholesome 96.66	Wholesome 125.13
	Disgusting 39.89	Boring 41.88	Disgusting 37.25	Disgusting 56.63
	Boring 32.60	Disgusting 41.36	Boring 19.13	Boring 52.05

Associations (Drink Makes me Feel…)

current flavor

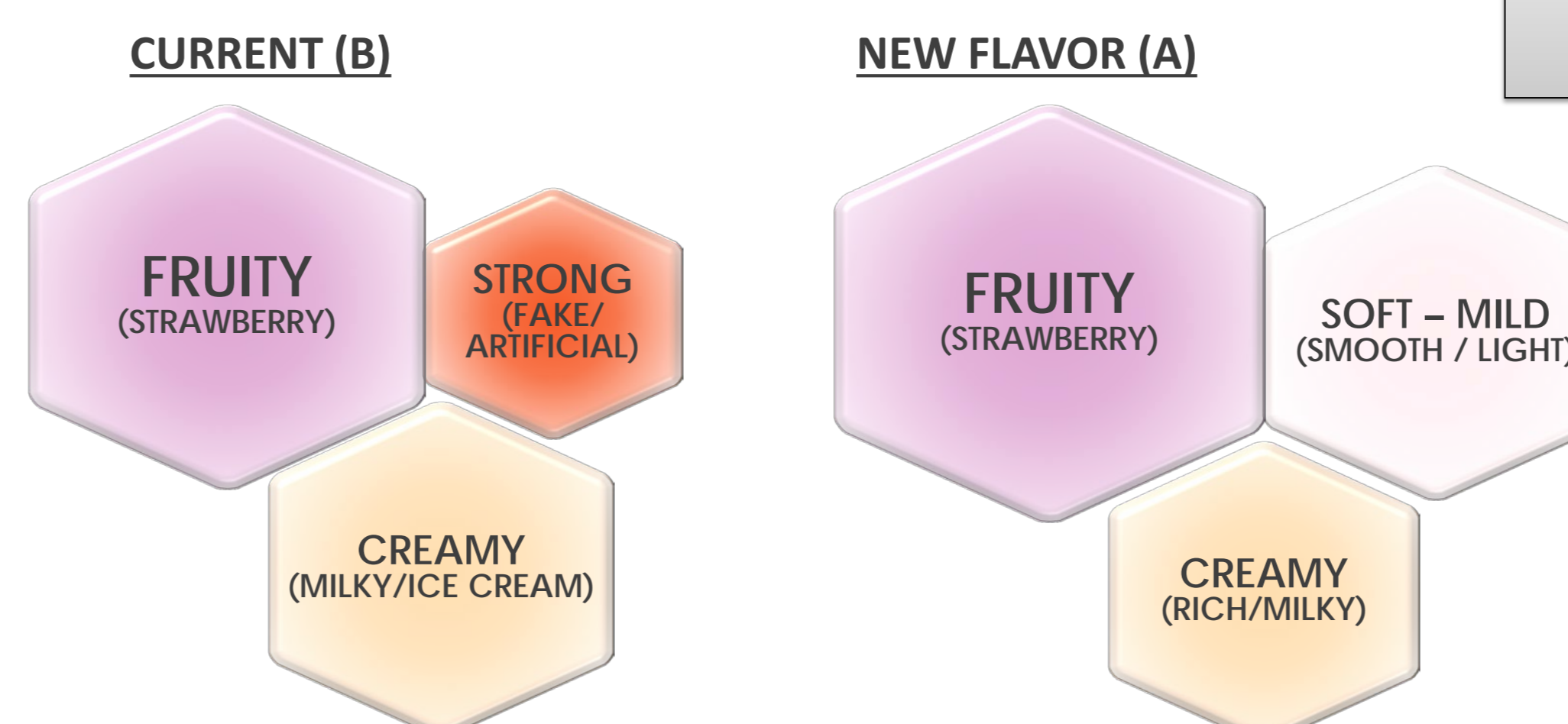|	A		B		C		D
	Satisfied 175.67	Satisfied 149.03	Satisfied 148.78	Pleased 153.03
	Comforted 158.56	Pleased 141.89	Pleased 143.20	Satisfied 148.72
	Pleased 149.43	Comforted 138.03	Comforted 128.50	Comforted 131.14
	Energized 110.84	Energized 116.70	Energized 102.95	Energized 122.48
	Powerful 108.30	Powerful 112.50	Powerful 98.00	Strong 106.80
	Strong 103.35	Strong 107.95	Strong 86.75	Powerful 105.95
	Invigorated 81.08	Invigorated 77.66	Invigorated 77.72	Invigorated 79.81
	Annoyed 29.63	Annoyed 41.41	Annoyed 34.70	Annoyed 58.05

Product A scored highest across both product and emotional attributes, netting it the highest score.
All were perceived as tasty and satisfying while Product A gave the sense of health and comfort putting it on top.
Product A is perceived as tasty, healthy, delicious, and refreshing. It is not seen as interesting, wholesome, disgusting, or boring. Consumers felt satisfied, comforted and pleased. They did not feel powerful, strong, invigorated or annoyed.
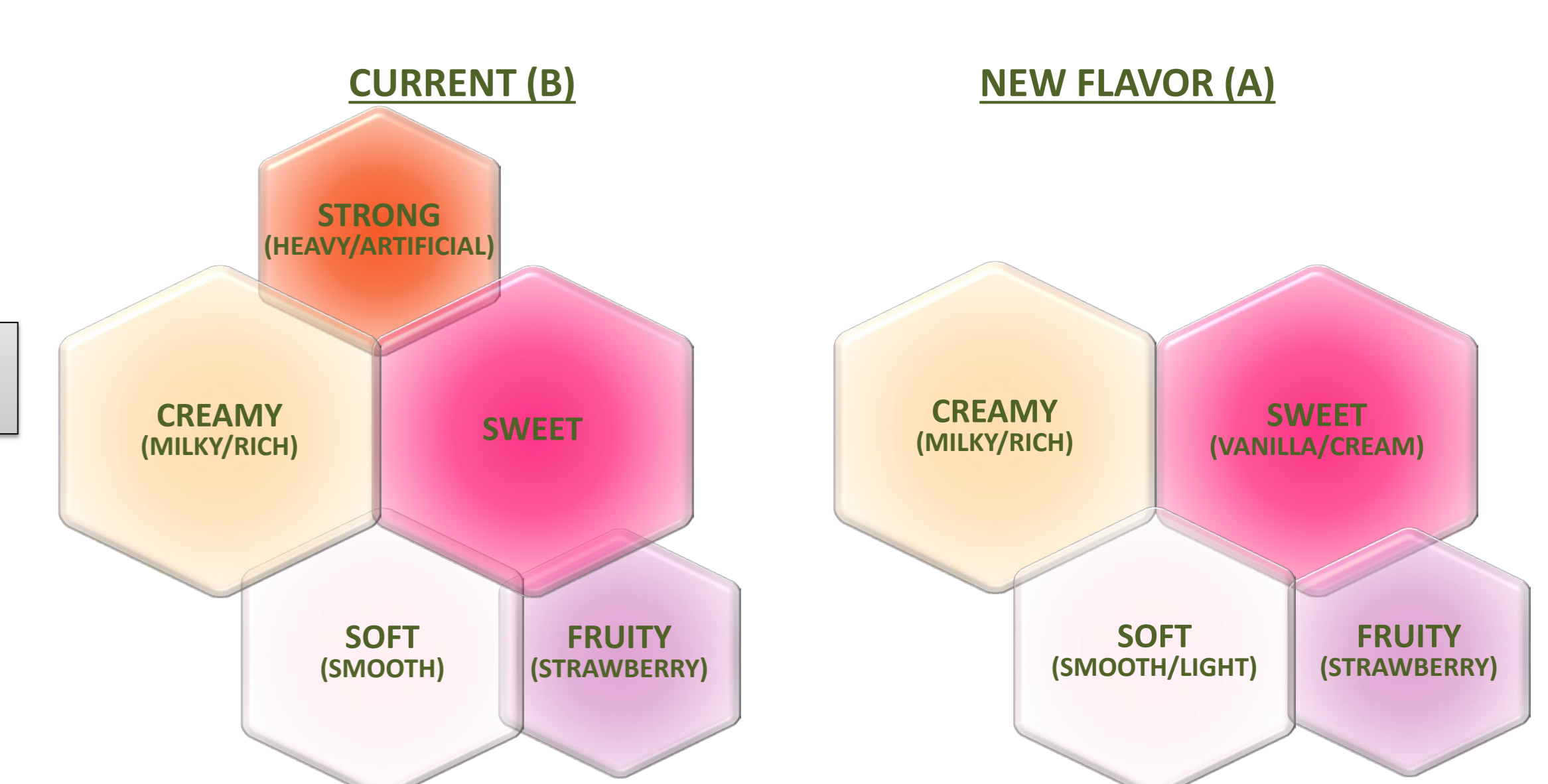
Phase 2

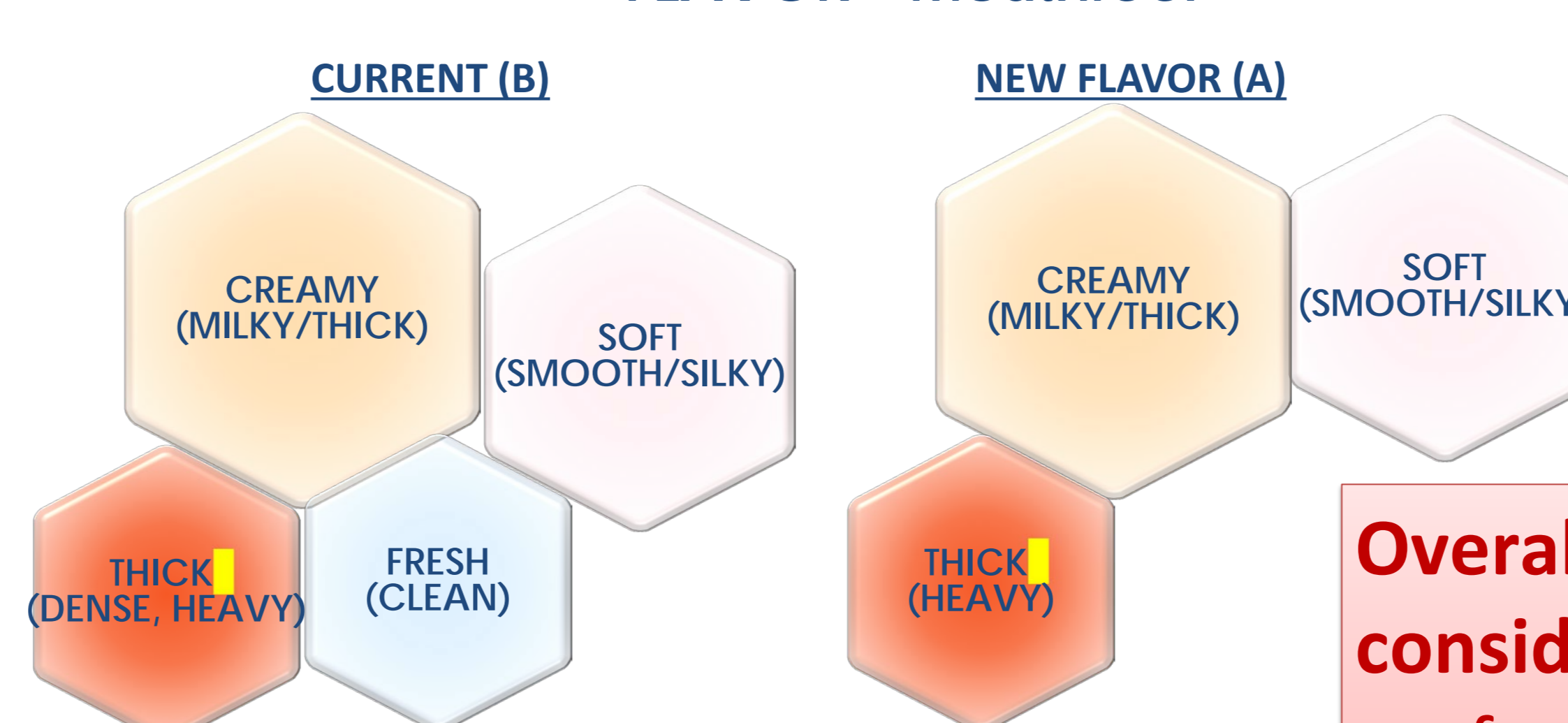### Sensorial Comparison of CURRENT and NEW FLAVOR - Smell

CURRENT (B)
FRUITY (STRAWBERRY)
STRONG (FAKE/ARTIFICIAL)
CREAMY (MILKY/ICE CREAM)

NEW FLAVOR (A)
FRUITY (STRAWBERRY)
SOFT – MILD (SMOOTH / LIGHT)
CREAMY (RICH/MILKY)

The **smell of CURRENT is highly liked** with it's **Fruity/Creamy** profile, however there is a **Strong** facet with a fake/artificial undertone (which was not always perceived as negative). The **smell of NEW FLAVOR is moderately liked,** yet NEW FLAVOR lacks the artificial aspect and is more soft and mild.

Sensorial Comparison of CURRENT and NEW FLAVOR - Taste

CURRENT (B)
STRONG (HEAVY/ARTIFICIAL)
CREAMY (MILKY/RICH)
SWEET
SOFT (SMOOTH)
FRUITY (STRAWBERRY)

NEW FLAVOR (A)
CREAMY (MILKY/RICH)
SWEET (VANILLA/CREAM)
SOFT (SMOOTH/LIGHT)
FRUITY (STRAWBERRY)

Overall, both **CURRENT** and **NEW FLAVOR** have balanced bouquets of flavors pertaining to the positive attributes of Creamy/Sweet/Soft/Fruity. However, some felt CURRENT had a **Strong Heavy and Artificial** element to it that was not found in NEW FLAVOR.

Sensorial Comparison of CURRENT and NEW FLAVOR - Mouthfeel

CURRENT (B)
CREAMY (MILKY/THICK)
SOFT (SMOOTH/SILKY)
THICK (DENSE, HEAVY)
FRESH (CLEAN)

NEW FLAVOR (A)
CREAMY (MILKY/THICK)
SOFT (SMOOTH/SILKY)
THICK (HEAVY)

Both **CURRENT** and **NEW FLAVOR** have a similar **Creamy, Soft** mouthfeel. **CURRENT** is somewhat more polarizing with some respondents saying that it is **Thick/Dense** and others saying that it has a **Fresher** feeling. **NEW FLAVOR** also has perceptions of being somewhat **Thick** and **Heavy**, which some liked.

Overall CURRENT and NEW FLAVOR are the strongest versions to consider. For key sensorial measures, **CURRENT** and **NEW FLAVOR** perform similarly, although **CURRENT** was somewhat more polarizing. **NEW FLAVOR** has strong appeal among both users and non-users on most key sensorial measures.