The Institute for Sensory Research
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# Descriptive Analysis of Chewable Vitamins

## Background

Due to capacity limitations, our client needed to qualify additional manufacturing lines to produce chewable vitamins.

Providing additional capacity is essential to delivering on order commitments.

Given the volumes of the current business, we do not want this change to impact the sensory characteristics of the chewable vitamins and risk alienating our client's current users.

This approach considers the inherent variability in the current manufacturing process, so that we do not incorrectly fail a facility due to a difference from a single lot.

## Objective

Our client wanted to determine if the chewable vitamins produced at new facilities fall within the current sensory profile that consumers expect from the brand.

Descriptive Analysis was used to quantitatively capture the sensory profile range of our current production and determine if products produced elsewhere fall within that range.

Products tested:

3 lots of current product

1 lot from new production site A

1 lot from new production site B

## Methodology

We utilized Descriptive Analysis: N=10 highly trained panelists with prior experience in the category, 5 samples total (3 Controls and 2 Variants from new production sites). A protocol and lexicon was created during training that included 31 attributes.Attributes consisted of aroma, texture between fingers and in mouth, taste, flavor and aftertaste. Samples were evaluated in 2 replications and were presented in a randomized monadic fashion, labeled with three-digit codes, served in 2 ounce plastic cups with lids to capture aroma.

Analysis of Variance with Tukey's mean separation was performed.

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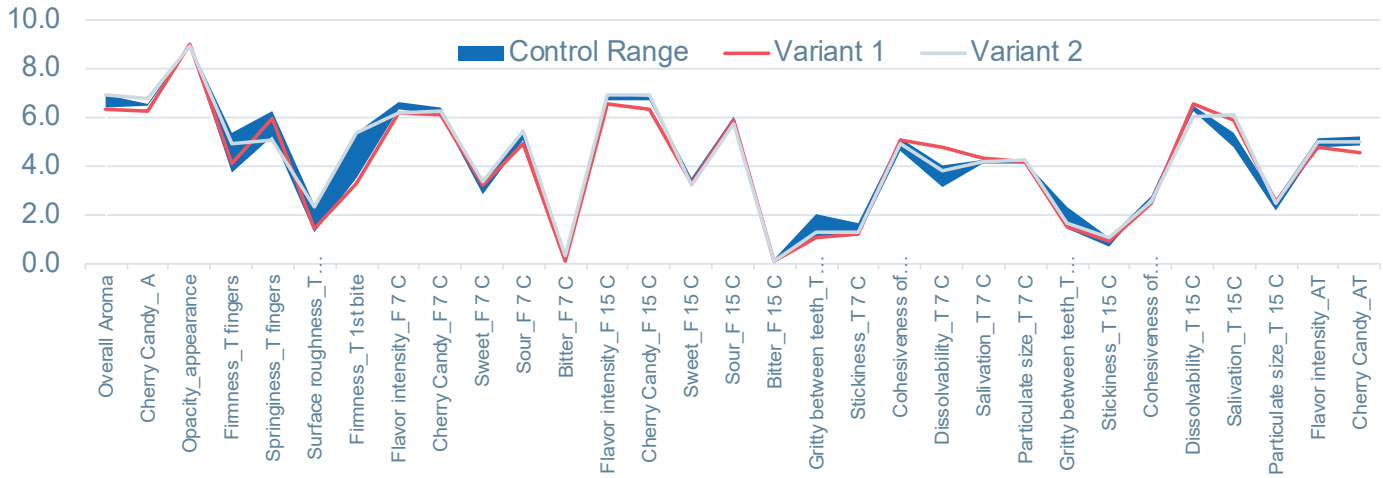
# Observations

Although significant differences were found among all 5 samples in Overall Aroma, texture between fingers, texture in mouth at first bite, sweetness and dissolvability at 7 chews, both variants fall within the intensity range of the Control samples and were not significantly different from the Control range.




# Insights

While the control samples were similar in sensory profile, they are not identical.

Differences were noted in the following attributes:

- Overall Aroma Intensity
- Texture between fingers
- Texture at first bite
- Sweetness

Chewable vitamins produced at the alternate production sites have similar sensory profiles to the controls and fall within the range of sensory variability.

Differences were noted between the 3 Controls and the 2 tested Variants in the following:

- Overall Aroma Intensity
- Texture between fingers
- Texture at first bite
- Sweetness

# Recommendations

Proceed with the qualification of the new production sites, but continue to monitor production at each of these facilities to ensure the sensory profiles continue to be as expected.

Continue to develop the sensory footprint for the chewable vitamin by incorporating additional lots into the evaluation in the future. This will aid in future qualifications and provide a more robust assessment of what is typical.

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