# Utilizing Descriptive Profiling, Secondary Consumer Research and Market Trend Information to Guide Energy Drink Flavor Development

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## Introduction

- In this fiercely competitive industry, it is becoming increasingly difficult for consumer packaged goods manufacturers to create winning products. Companies must differentiate their offerings to keep consumers interested long-term.
- For food products, flavor is a key factor that influences consumer appeal and, ultimately, purchase and repeat purchase and must not only be well-liked, but also differentiated from other flavor offerings if the resulting product has any chance of success in the market.
- This study highlights a unique approach to flavor optimization and differentiation utilizing descriptive profiling, secondary consumer research and market trend information. The output includes a visual representation of the US energy drink market from a flavor perspective, including areas of flavor saturation and white space opportunities. Companies can leverage this information to guide energy drink flavor development.

## Materials & Methods

**Product Selection**

- 98 retail energy drinks from across the globe (US, Latin American, Asia-Pacific and Europe)
- Regular (not sugar-free or low-cal)
- Market leaders and niche products

**Product Categorization**

Products were classified into four flavor camps (Yellow, Red, Red Bull-Type and Other) by Givaudan Flavorists and Sensory based on flavor profile similarity

**Descriptive Profiling**

- Givaudan expert panel profiled the 98 global retail products
- Quantitative Flavor Profiling (QFP) methodology
- Consensus using Givaudan Sense It™ language




**Analyses**

- Principal Components Analysis (PCA)
- Agglomerated Hierarchical Clustering (AHC)

**Maps**

- Created three global flavor maps (one for each flavor camp except Red Bull-Type) that display the unique flavor clusters for each flavor camp
- The US products and their respective flavor attributes were transferred to their own maps and superimposed with the following information:
  - Flavor nuances found only in the global products
  - IRI data (year ending August 2008) for each flavor camp and, specifically, flavor cluster within each camp, to arrive at a proxy of cluster size based on energy drink sales
  - Market trend information (active screening of traditional secondary sources, proactive market scanning, restaurant/culinary influences and media/mass influences); energy space market trends = 1) Hispanic-preferred profiles (tropical, citrus), 2) Emerging ingredients (green tea, herbs, ginger), 3) Botanical ingredients and 4) Fresh and perceptions of fresh (ripe fruit and vegetables)

## Conclusions

**Red Bull-Type Camp (no map for this camp)**

- Market is saturated with red bull-type flavor profiles (bubble gum, cherry, medicinal, pineapple and/or lime); recommendation is to focus development efforts elsewhere

**Yellow Camp**

- Dominated by generic ripe yellow fruit and lemon-lime profiles
- Opportunity exists to target Hispanics with mango, papaya, guava, tangerine and mandarin
- Ripe orange is also under-represented and would potentially satisfy consumers looking for fresh-tasting offerings
- Interesting global flavor nuances not present in US products include cider, raspberry candy, green grass and dried fruit

**Red Camp**

- Very few products in this flavor camp compared to Yellow; Red Bull flavor profiles are indistinguishable in IRI data and, as such, the clusters in the Red Camp are likely overstated
- Dominated by generic red berry and cherry flavor profiles
- Opportunity to target consumers looking for fresh-tasting offerings with raspberry, strawberry, cranberry and pomegranate
- Red currant might satisfy consumers looking for emerging profiles
- Interesting global flavor nuances not present in US products include honey and dried fruit

## Conclusions (cont.)

**Other Camp**

- Dominated by coffee and cocoa flavor profiles
- Opportunity to target consumers looking for botanical and/or emerging profiles with botanical, honey/floral and ginger
- Interesting global flavor nuances not present in US products include green vegetable, ginger and eucalyptus

## Results

**Figure 1 . Flavor Profile Gaps in US YELLOW Energy Drink Market**

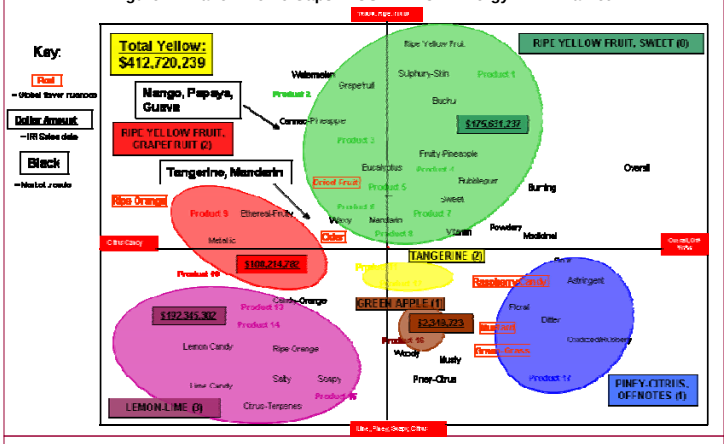


**Figure 2 . Flavor Profile Gaps in US RED Energy Drink Market**

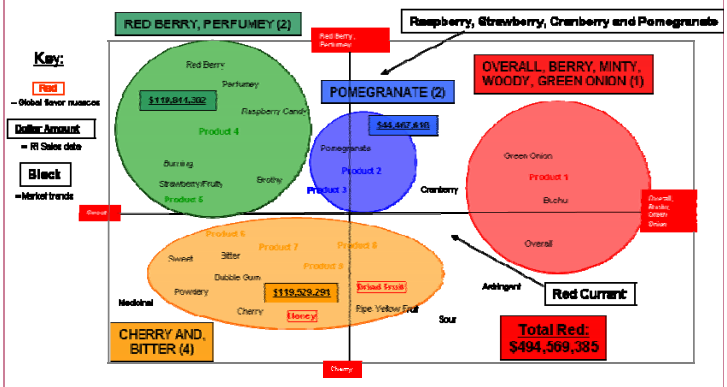


**Figure 3 . Flavor Profile Gaps in US OTHER Energy Drink Market**

