

## **Chemical, physical, and sensory properties of four grape tomato varieties**

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According to a recent article in *Food Technology* (Volume 57, 2003), the consumption of fresh vegetables has increased 26% over the last thirty years. According to the National Restaurant Association, salads have been the most frequently ordered menu items for two consecutive years. These trends also hold with fast food chains, which are starting to offer more high-quality salads featuring ingredients like grape tomatoes. The first grape tomato variety widely introduced, Santa Hybrid, has nearly the same flavor as other tomatoes, but is much sweeter due to an almost 10% sugar content.

The objective of this study was to characterize the chemical, physical, and sensory attributes of four grape tomato varieties: Chiquita, Sweet Olive, Red Grape, and Tami-G.

A sensory evaluation (seven point hedonic rating of color, flavor, texture, and overall acceptability) was conducted with statistical analysis completed using Compusense<sup>®</sup> computer software program. Additionally, Hunter color, pH, and Brix measurements were collected for all varieties.

Chiquita was found to be significantly less appealing ( $P < 0.05$ ) with regard to color than any of the other varieties. Since the colorimeter results showed that both high a and b values are desired, red and yellow hues are significant when deciding which variety to use. Similarly, a significant difference ( $P < 0.05$ ) between Chiquita and the other three varieties was found with regard to overall acceptability. However, flavor and texture were not significantly different. The results showed that both pH and Brix did not differ across variety.

These results suggest that when flavor, texture, pH, and Brix of grape tomatoes do not differ, color is a strong driver of overall acceptability. Bluish hues were not readily accepted by the consumer; consequently, growers should select varieties with the brightest, most red and yellow color because those are preferred by consumers.