



## **EDITORIAL BACKGROUND**

### **Nature Creates It, Sensus Captures It**

*The best way to capture a flavor is to extract it from nature at its peak of quality and freshness, then preserve it as much as possible during processing. Sensus, LLC was founded on that simple – yet technically complex – principle.*

#### Foundations

It began with a vision. Dr. Dan Wampler, a researcher at Pillsbury's Green Giant Division and natural flavor company Tastemaker, believed there was a better way to extract flavor from horticultural products and improve the taste of foods and beverages. Dan created Sensus in 1999 to offer the freshest, highest quality, natural flavor ingredients by combining:

- A unique approach to flavor engineering
- Totally fresh raw materials
- State-of-the-art flavor recovery technology

#### Unique Approach to Flavor Engineering

Since the company's inception, the Sensus approach has been to maximize flavor quality by minimizing the loss of flavor during processing, through the optimization of leading edge extraction, clarification and concentration methods. This approach can be summed up in the equation

$$Foq = FFq + \Sigma \text{ losses}$$

where  $Foq$  is optimal flavor quality,  $FFq$  is final flavor quality and  $\Sigma \text{ losses}$  are the detrimental effects from evaporation, heat, post-harvest physiological degradation, and other factors during handling and manufacturing.

Working from this basic flavor engineering equation, Sensus has come up with a revolutionary way to produce premium essences, concentrates and extracts.

#### Totally Fresh Raw Materials

It all starts with the inputs. To ensure optimal flavor quality at the end of the process, Sensus is vertically integrated to take advantage of the freshest raw materials from the beginning.

Sensus works directly with the growers and handlers of tea, coffee, herbs, vegetables and botanicals to ensure that these products are harvested at their optimum maturity and that consistent quality and stringent food safety guidelines are followed.

Vertical integration also allows Sensus to research each product and choose those with the highest organoleptic values: flavor quality, inherent color, texture and aroma. Bioactive components are also considered.

Sensus ensures that only the best horticultural varieties are used and the highest quality ingredients go into its essences and concentrates.

#### State-of-the-Art Flavor Recovery Technology

Flavor extraction takes place at Sensus' production facilities in Hamilton, Ohio and Los Banos, California. Using a state-of-the-art Single Pass Extraction (SPE) approach, Sensus integrates a number of leading edge unit operations. Volatile flavor components are captured, and the soluble solids are clarified and concentrated in a continuous processing system. Finally, the captured flavor volatiles are combined with the soluble solid at optimal levels to tie the finished product to the original horticultural material. Sensus' process ensures that there are no heat-induced flavor off-notes, and the freshest, truest flavor ingredients are produced.

#### Growth and Continued Investment

Today, Sensus has the capacity to extract premium flavor essences and concentrates from up to 30,000 lbs. of input per hour. With a 40,000 square foot expansion nearly complete, that number will soon triple. The company offers a broad range of tea, coffee, herb, vegetable and other botanical flavor ingredients. It is continually researching new products as well as how to optimize the inherent natural fresh flavor, phytochemical and antioxidant content of its current product line. Sensus can also customize products for a specific application or processing requirement.