



Developing Qualitative and Quantitative Sensory Data

Tasting flavor ingredients at selected use levels, provides a more accurate approach for selecting ingredients and use levels for flavor creation. It provides descriptive and quantitative intensity properties of an ingredient, and provides an insight into the use of the ingredient. Tasting and documenting sensory properties provides confidence in using the ingredient, reduces trial and error, saves time, and produces faster and usually better results.

Developing Quantitative Sensory Data involves determining the flavor intensity or strength of the ingredient at various ppb, ppm, or %, use levels. An arbitrary scale of 1-6 is used for this purpose. The ingredient under evaluation is tasted from threshold to high intensity.

Relative (subjective) intensities of foods serve as examples for determining flavor ingredient intensities. Normal foods we eat have an intensity of about 3-3.5. Spicy or acidic foods would have a higher intensity.

Water has an intensity of 0. When we create a flavor, ingredients that “stick out” would have intensities greater than 3.5. Most all ingredients we use in the flavor industry have a maximum use level, where the intensity and best flavor profile is preferred. Above that use level, the flavor can be weaker, stronger, or have an off flavor. This is why tasting the ingredient at various use levels gives an insight on the use of that ingredient.

Evaluating flavor ingredients:

Savory ingredients like HVP, AYE, etc. are tasted in a range of 0.05% to 0.4%. Flavor chemicals, essential oils, etc., are tasted in ppb and ppm use levels. These ingredients are tasted over a use level range to determine the sensory properties of that ingredient. The ingredient is tasted with the same temperature water, and evaluated at or below threshold initially, before tasting at higher use levels.

Generally the ingredient is tasted at 0.05, 0.1, 0.5, 1.0, 2.5, 5.0, 7.5, and 10.0 ppm. The range is extended higher or lower if necessary. The sensory data is reproducible, and is also useful for quality control for aged ingredients, and to compare ingredients.

Our Flavor Software contains hundreds of flavor ingredients with qualitative and quantitative sensory data.