



## USING STEVIA SWEETENERS IN SALAD DRESSINGS

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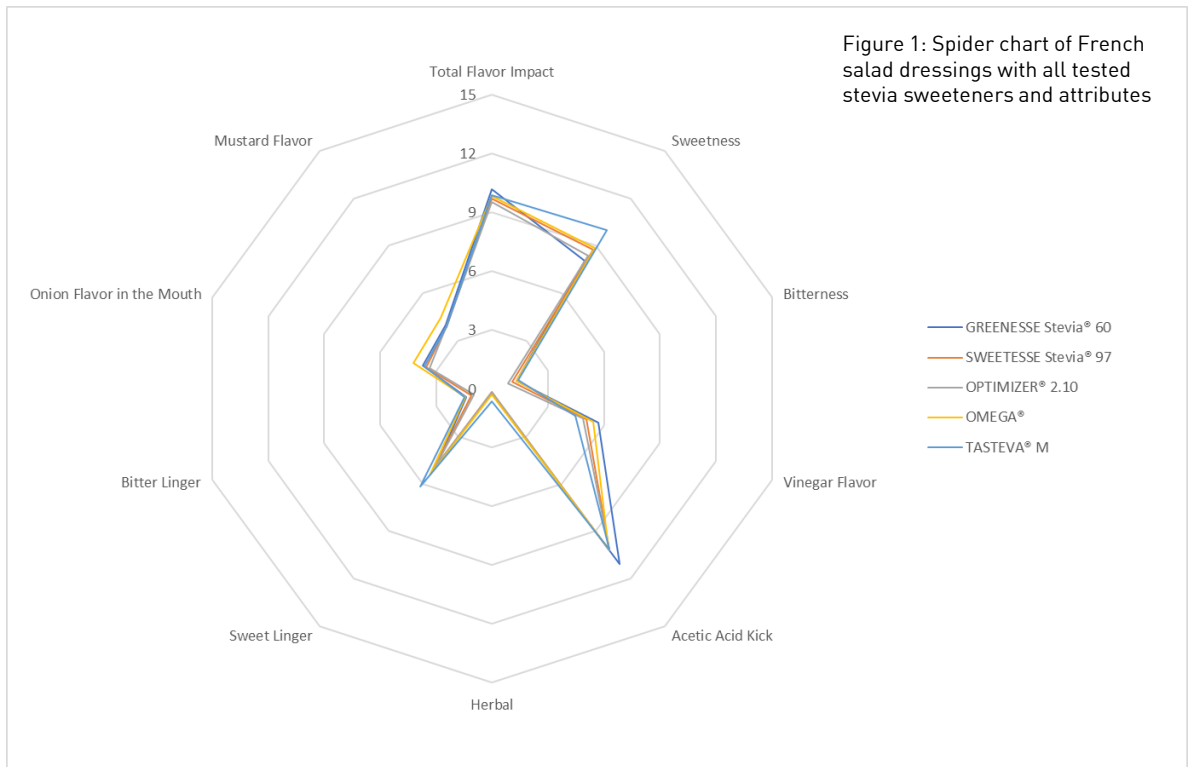
Mirroring consumer health concerns over sugar intake, and mounting pressure on manufacturers to reduce sugar content, no added sugar claims have become prominent in recent food launches, including the sauces and dressings market. Ingredients from natural sources are appealing to consumers as they align with the desire for 'real' foods and simple ingredients. Consumers are increasingly scrutinizing product labels and ingredient lists, looking for options that suit their dietary needs.

Stevia is one of the most popular and fastest-growing low calorie sweeteners globally. As a plant-based, sugar alternative, stevia delivers on the clean-label trend while offering zero calories. The sweetness potency of the stevia sweeteners ranges from about 200-300 times sweeter than sugar, depending on the level of sweetness being replaced. They exhibit good stability, are suitable for use in low-pH products and have demonstrated stability to high temperature processes, such as pasteurization. Sensory data shows that approximately 80% of the population is sensitive to bitter off-notes associated with some natural, stevia-based sweeteners on the market<sup>1</sup>. However, the stevia offerings from Tate & Lyle have a substantially cleaner aftertaste than other stevia derived sweeteners, allowing for higher sugar replacement levels and cost-effective, better tasting solutions.

Let's take a closer look at a recent study done on French Dressing and the use of stevia sweeteners:

Reducing Sugar in French Dressing	
Flavor Profile	<ul style="list-style-type: none"> <li>• Tangy, zesty, spicy</li> <li>• Flavored by tomato and/or paprika added to oil and vinegar</li> </ul>
Average Sugar Content per serving	<ul style="list-style-type: none"> <li>• Most market products contain sugar or high fructose corn syrup</li> <li>• A two-tablespoon serving can contribute as much as 5-6 grams of added sugar</li> </ul>
Challenges to Address When Reducing Sugar	<ul style="list-style-type: none"> <li>• Build back sweetness, body, texture, and mouthfeel</li> <li>• Removing sugar can impact flavor and adding ingredients may contribute off-flavors, bitter notes, or other undesirable characteristics</li> <li>• Taste needs to match control as close as possible</li> </ul>

Several criteria can be used to assess stevia sweeteners, including amount of sweetness required, flavor profile of finished product, sensory attributes, and cost in use. We conducted research on a variety of our stevia offerings, from a Reb 60 product to an ultra-premium Reb M product. The project was designed to understand the total flavor impact, sweetness, bitterness, vinegar flavor, acetic acid kick, herbal, sweet linger, bitter linger, onion flavor in the mouth, and mustard flavor attributes of French dressing utilizing modified flash qualitative descriptive analysis (QDA).



Compared to the other stevia sweeteners tested, TASTEVA® M provided the highest sweetness in the French dressing, but the sweet linger needs to be considered. Vinegar flavor and acetic acid kick were statistically significantly higher of the French dressing made with GREENESSE Stevia® 60 than the French salad dressings made with OPTIMIZER® 2.10, SWEETESSE Stevia® 97, and TASTEVA® M. Onion flavor in the mouth and mustard flavor were statistically significantly higher of the French dressing made with OMEGA® than the dressings made with SWEETESSE Stevia® 97. All selected stevia sweeteners were very low in bitter linger and herbal attributes. OPTIMIZER® 2.10 showed lower bitterness and slightly lower total flavor impact. In an acidic dressing, OPTIMIZER® 2.10 might be rounding out the flavor profile more than the other stevia sweeteners.

Choosing the optimal stevia sweetener for your recipe and process is all about understanding your formulation, target levels of sugar replacement, desired sensory outcome and ingredient properties and features needed to deliver the desired function. We are ready and willing to help you navigate the right stevia selection for your application and creating a winning formula to drive repeat purchase decisions for your brand.

<sup>1</sup>Tate& Lyle Sensory Study