

Study suggests color of sweetener packet impacts sweetness perception and liking

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A study published in the *Journal of Food Science* found that the packet color of nonnutritive sweeteners may impact the sweetness perception and overall liking of the product.

In the study, 560 subjects evaluated five sweeteners: sucralose (yellow), stevia (green), saccharin (pink), aspartame (blue) and sucrose (sugar) (white). Subjects received [sweetener](#) packets under two conditions: control (brand name only) and informed (brand name/packet image), to assess impact of the packet color. For each condition, five identical tea samples each labeled with a sweetener type were rated for sweetness and overall liking and emotions.

The researchers from Louisiana State University found that sweetener type exerted a significant effect on sweetness liking, overall liking and [emotional](#) responses. Consumers rated sweetness liking and overall liking higher for sucrose than for nonnutritive sweeteners. The name and colored sweetener packet elicited more differentiating emotions than sweetener name alone. Results demonstrated a trend of significantly lower intensity of positive emotions for nonnutritive sweeteners compared to sugar, and vice versa for negative emotions, except for the emotions "worried" and "free" in both control and informed conditions.

Sweetness liking was strongly correlated with the emotion "satisfied" for sucralose and saccharin only in the name condition, whereas it was strongly correlated with the emotions "pleased" and "satisfied" for stevia, "disgusted" for aspartame and "satisfied" for sucrose in the name/packet image condition. Essentially, the sensory-emotion profile of sucrose was distinct from that of nonnutritive sweeteners regardless of actual taste of the product.

"The premise of this present work is that the characteristic packet colors of sweeteners may generate expectations, and this likely reflects

sensory impressions about product characteristics thereby influencing liking and consumer emotions," the authors wrote.

More information: Wisdom Wardy et al. Influence of Package Visual Cues of Sweeteners on the Sensory-Emotional Profiles of Their Products, *Journal of Food Science* (2017). [DOI: 10.1111/1750-3841.13610](#)

Provided by Institute of Food Technologists

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