



Sweet! Researchers' device 'tastes' sweeteners

- Story Highlights
- Business card-sized tool distinguishes between 14 types of sweetener
- Food service industry interested in better methods than taste-testing
- Scientists hope to find ways to measure other tastes

By Andy Rose CNN

(CNN) -- A handheld device the size of a business card can be used to "taste" the sweetness in food and drinks, say researchers, who add that it could be an early step toward developing a fully artificial tongue.

Scientists at the University of Illinois at Urbana-Champaign said that when the device is dipped into a food or drink, a series of color-coded dots reveals what type of sweetener is present.

"It's very much the same process that's involved in litmus paper," lead researcher Kenneth Suslick told CNN Radio.

The sensor is able to distinguish among 14 kinds of sweeteners, from natural sugars to artificial products such as Splenda. The project got the attention of the food-service industry, which is looking for testing methods that are less expensive and time-consuming than taste-testing or laboratory work.

The new sensors are able to produce a result in two minutes, compared with the 30 minutes or more required by traditional laboratory techniques.

"As far as real-world applications at this point, it would be more of a quality-control device," said researcher Christopher Musto, who presented the device this week to the national convention of the American Chemical Society.

However, the scientists have much bigger long-term goals. Since the device can detect one specific type of taste, they hope to find ways to measure the others, as well.

The human tongue can detect five distinct tastes: sweet, salty, sour, bitter and umami. The last is also known as richness or meatiness.

"I don't know if I could say that we could actually build an array that could mimic exactly how we taste, 100 percent," Musto said. Still, he added with a laugh, "I didn't think we'd get this far on this one. You never know."

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