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Tastebuds on a Chip

Researchers at the University of Texas have designed an **electronic** "tongue" that they say may eventually be used by food and beverage manufacturers to taste and analyze their products.

The device relies on compounds that act as sensors, changing color in the presence of specific chemicals. The Texas engineers found a way to attach these sensors to tiny beads that are then placed in microscopic cavities machined into a chip of silicon. When a liquid is placed on the chip, the sensors turn colors, which are then read and analyzed by a computer.

In theory, the "tongue" could hold enough kinds of sensors that would enable it to distinguish sweet, sour, salty, bitter and the all the nuances among them. But now, only a few basic sensors are used -- for acidity and alkalinity, for example. No word on when the device might be able to detect the soft woody notes and subtle overtones of pineapple to be found in a glass of Château Lafite.