

At last a machine with good taste -- for espresso

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Can a machine taste coffee? The question has plagued scientists studying the caffeinated beverage for decades. Fortunately, researchers in Switzerland can now answer with a resounding “yes.” The study on their coffee-tasting machine is scheduled for the March 1 issue of ACS’ *Analytical Chemistry*.

For the food industry, “electronic tasters” like these could prove useful as quality control devices to monitor food production and processing.

Christian Lindinger and colleagues at Nestlé Research pointed out that coffee scientists have long been searching for instrumental approaches to complement and eventually replace human sensory profiling. However, the multisensory experience from drinking a cup of coffee makes it a particular challenge for flavor scientists trying to replicate these sensations on a machine. More than 1,000 substances may contribute to the complex aroma of coffee.

The new tasting machine assessed the taste and aromatic qualities of espresso coffee nearly as accurately as a panel of trained human espresso tasters, the study reported. It analyzed gases released by a heated espresso sample, then transformed the most pertinent chemical information into taste qualities like roasted, flowery, woody, toffee and acidity. “This work represents significant progress in terms of correlation of sensory with instrumental results exemplified on coffee,” state the authors.

Source: ACS

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