

Smartphone-based system can detect bacteria in food

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Led by food scientist Lili He, the researchers designed a chip that combines a molecule called 3-mercaptophenylboronic acid (3-MBPA), capable of binding to bacteria.



The chips are soaked in a juice sample or crushed food, and then washed with a high pH buffer liquid to wash away things like sugar, fat and protein from food, but not at all. any bacteria

Next, the chip is placed in a simple light microscope, this glass has been designed for use with smartphones. The application then counts the bacteria in the chip - it can detect up to 100 bacterial cells on 1ml of solution.

Results were less than two hours while standard methods for culturing bacteria on current food samples took up to two days. Although there are other methods of detecting bacteria faster, he claims that they are not as sensitive and reliable as the new chip.

Hopefully once this technology is available on the market, it can be used by chefs, housewives, and even relief workers in disaster areas to check for bacteria in food and Rescue water source.

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