

New surface coatings for food facilities hold promise for food safety

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One of the keys to preventing food-borne illness and food waste is making sure that the surfaces at production facilities remain free of contamination between scheduled cleanings.

So researchers are investigating special new coatings that are more resistant to bacteria and other microbes than the [food](#) contact surfaces that are used now, according to a July 17 symposium at IFT16: Where Science Feeds Innovation, hosted by the Institute of Food Technologists (IFT).

"Manufacturers already work diligently to keep their facilities clean, but we are creating materials that are even less likely to harbor bad bugs," says Julie Goddard, an associate professor in the department of food science at Cornell University. "We have designed new polymer coatings that can be applied to food processing surfaces that resist microbial adhesion and can actually inactivate any microbes that do adhere, preventing them from growing and potentially contaminating our food supply."

The coatings are still being researched but may be available commercially within a few years, she says.

Designing effective and durable coatings isn't an easy task. "It's a hard life for the equipment used in food production facilities because the coatings have to hold up to acidic and caustic cleaners, temperature extremes and abrasions from scrubbing. It's a huge challenge to find

coatings that will work under these extreme conditions," Goddard says.

One new coating works on resisting bacteria in several different ways, she says. "It has been shown to inactivate 99.999% of *Listeria monocytogenes*, a microbe that is a significant threat to food safety."

In addition to being important to food safety, coatings like this can help reduce the massive amount of food that is wasted due to spoilage microbes, she says.

There are other areas of the food processing plant that might benefit from this type of [coating](#) including door knobs, HVAC vents and drains, which can harbor microorganisms that can make our food spoil faster or potentially make people ill, Goddard says. Another application for these coatings may be to use them on handling and harvest equipment for fruits and vegetables, she says.

Provided by Institute of Food Technologists

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