

Assessing the risks from 'grease-proofing' chemicals in food packaging requires new methods, studies

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Developing ways to measure and study exposures to a class of synthetic chemicals is critical to addressing potential health risks stemming from a

long history of consumer uses in food wrappers, popcorn bags and paperboard.

Exposures to some of the 4,000 or so members of the per- and polyfluoroalkyl substances (PFAS) class of chemicals have been associated with potential adverse health effects such as high cholesterol, low infant birth weight, reduced antibody response to vaccines and high blood pressure. While environmental studies of PFAS have advanced, gaps remain in our understanding of how much humans are exposed to PFAS from [food](#) and packaging, and the associated risks, if any.

This prompted the Institute for the Advancement of Food and Nutrition Sciences to sponsor a symposium titled "Identifying Science Gaps for Risk Assessment of Per- and Polyfluoroalkyl Substances in Food." Given the importance of measurement systems, the symposium first focused on [analytical methods](#) and science gaps for detection and quantification of PFAS in food. Additionally, presenters addressed exposure routes and detection in foods—including FDA and USDA work in the area—and touched on potential effects of short-carbon chain replacements for longer-chain biopersistent PFAS.

The symposium proceedings were recently published in *Trends in Food Science & Technology*, a peer-reviewed journal. Some of the challenges involve understanding which products have intentionally added PFAS versus incidental environmental contamination from processing waste. Moreover, future method validation is needed to develop standard approaches for extraction, screening and quantification of PFAS compounds. Continuing to develop methods will support FDA's and USDA's ongoing monitoring of PFAS in produce, dairy, meat and bread. But the absence of validated, standardized methods makes it difficult to compare results and poses a challenge to risk managers here and abroad.

There are still many knowledge gaps on risks associated with PFAS, but

risk management efforts need to be supported through analytical testing by the adoption of international performance standards and the development of official compendial methods, according to speakers at the symposium.

More information: K.L. Vorst et al, Risk assessment of per- and polyfluoroalkyl substances (PFAS) in food: Symposium proceedings, *Trends in Food Science & Technology* (2021). [DOI: 10.1016/j.tifs.2021.05.038](https://doi.org/10.1016/j.tifs.2021.05.038)

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