

Air frying causes least indoor pollution

Slide by Neil Goalby. Available from rsc.li/3PG4sDk

Research shows air fryers are the least polluting cooking method. Researchers compared five cooking methods for chicken breast: pan frying, stir-frying, deep-fat frying, boiling and air frying. Pan frying generated over 150 times higher particulate concentration than air frying. Pan frying also generated 10 times higher indoor volatile organic compound concentration than air frying. The reactions responsible for browned food's distinctive flavour – the Maillard reaction – cause the increased air pollution from oil-based cooking methods.



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Deliciously browned, but significantly less polluting

Questions

1. What are particulates?
2. Give a health problem caused by particulate pollution.
3. Suggest why oil-based cooking techniques are more polluting than water-based ones.