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# Contamination of meat products during smoking by polycyclic aromatic hydrocarbons: Processes and Prevention.

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## ABSTRACT

Meat products may be contaminated by carcinogenic polycyclic aromatic hydrocarbons (PAH) during smoking. This review is focused in the 10 variables of the smoking process that have been studied by researchers, according to the Codex Alimentarius Commission CAC/RCP 68/2009: the type of fuel, the smoking methods (direct or indirect), the smoke generation process (temperature of pyrolysis and to airflow), the distance and position between the food and the heat source, the products fat content and its evolution, the smoking time, the temperature during smoking, the cleanliness and maintenance of equipment, the design of the smoking chamber and the equipment. A new variable reported by researchers, the casing type, is also included. The main aspects concerning PAH contamination of meat products, such as the smoking process history, types of smoking, aim and composition of smoke, PAH formation and transport mechanisms, analytical methods for PAH determination, presence of PAH in meat products worldwide and regulations, are also reported and briefly discussed.

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