

عنوان مقاله:

Formation of acrylamide in processed food- A review

محل انتشار:

دومین همایش ملی علوم و صنایع غذایی (سال: 1392)

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نویسنده:

Mahmoud Hosseinnejad - *Master of Food Science - Gorgan University of Agricultural Sciences and Natural Resources*

خلاصه مقاله:

Reports of the presence of acrylamide in a range of fried and oven-cooked foods have caused worldwide concern because this compound has been classified as probably carcinogenic in humans by the International Agency for Research on Cancer. Asparagine, a major amino acid in potatoes and cereals, is a crucial participant in the production of acrylamide by maillard reaction at temperatures above 1001 C. Other minor reaction routes have been proposed for acrylamide formation, such as from acrolein in the absence of asparagine, a pathway that was suggested to play a role in lipid rich foods. In general, potato products, coffee, and bakery products are the most important sources for acrylamide. Potential of acrylamide formation in heat-processed foods is related to the sugar content, initial concentration of reactants, temperature and time of processing, pH and water activity

کلمات کلیدی:

Acrylamide; Asparagine; Amino acid; Maillard reaction; Food

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