ACRYLAMIDE MITIGATION STRATEGIES

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Abstract

Detection of acrylamide levels in processed foods has been an intensive area of research shortly after the discovery of acrylamide in heated foods by the Swedish researchers in April 2002. Several researchers have established that the main pathway of acrylamide formation in foods is linked to the Maillard reaction and, in particular, the amino acid asparagine. Thermally processed foods encompass a vast range of different products with many ingredients, processes, recipes and scales of operation. The resulting acrylamide concentrations in these foods change with great deviations as influenced by product composition and thermal processing conditions.

Basic facts on the mechanism of acrylamide formation and factors affecting its concentration in thermally processed foods are overviewed in this presentation. Current EU regulation on mitigation measures and benchmark values and recent research findings for mitigation of acrylamide by means of recipe and process modifications are also discussed.