

## ACRYLAMIDE IN FOODS

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High concentrations of acrylamide found in common thermally processed foods attained considerable public concern since it has been classified as a probable human carcinogen.

Acrylamide formation occurs during the browning process by Maillard reaction of reducing sugars with asparagine. The major reactants leading to the formation of acrylamide are sugars and asparagine at temperatures above 120°C.

Among the different food products, the highest levels of acrylamide have been found in French fries, potato chips, and other fried, deep-fat fried, or oven-cooked potato products, together with some crisp bread, biscuits, crackers, and breakfast cereals. These findings gave rise to legal authorities to initiate concepts for minimization of acrylamide in commercial and homemade foods.

To satisfy the increased awareness, sophistication and greater expectation of consumers, it is necessary to improve quality evaluation of food products. Food industry requires some tools to be used for inspection and evaluation purposes by means of rapid prediction of acrylamide level in food products.

The subject matters of this presentation are;

- i. An approach for the rapid detection of acrylamide level in potato chips using computer vision based technique,
- ii. A strategy for the minimization of acrylamide level in foods using divalent cations