

REDUCING ACRYLAMIDE IN BREAKFAST CEREALS

What is Acrylamide?



Acrylamide is a substance that naturally forms in carbohydrates products (coffee, potatoes and grains) during every-day high temperature toasting, baking and frying (at above 120°C and low-moisture), due to a reaction between sugars and an amino acids naturally present in many foods. This is part of the Maillard Reaction that also 'browns' food and provide its particular taste. Acrylamide formation occurs in food that is prepared commercially and in food that is prepared at home. Public health authorities recommend consumers to eat a varied diet, and have not issued any advice to stop eating foods on the basis of their acrylamide content.

Where is acrylamide found:



How to reduce acrylamide formation?

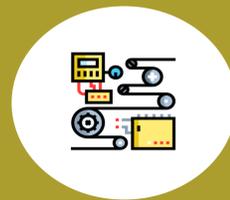
Acrylamide has been present in food for as long as humans have been baking, roasting and frying. It would be impossible to eliminate acrylamide in our food. Nonetheless, CEEREAL members continue to research on way to reduce acrylamide formation through out the value chain as acrylamide formation depends on the following 4 factors:



Raw material



Recipe



Preparation



Cooking
(Toasting / Baking/
Frying)

Outlook for the Future

Members of CEEREAL continue to take the lead on their efforts on acrylamide mitigation. There is no single solution due to the complexity of the factors to be considered. As a priority further research is required which also includes work with academics to reduce the natural occurrence of the precursor (e.g. asparagine) in raw materials.

ACRYLAMIDE REDUCTION MILESTONES

- Discovery of acrylamide in food

2002

- Breakfast cereal producers sponsor research with the 'Link Project' carried out by Rothamsted Research
- The UK Food and Drink Federation organizes a series of webinars to SMEs on acrylamide mitigation

2011

- Publication of the 15th edition of the FoodDrinkEurope AA Toolbox
- Publication of the European Commission Guidance on AA

2018

2005

- Publication of the first FoodDrinkEurope Acrylamide Toolbox. The first industry knowledge sharing platform on Acrylamide mitigation

2017

- EC Regulation (EU) 2158/2017 establishing mitigation measures and benchmark levels

References

- 1)EFSA Acrylamide infographic
- 2) FoodDrinkEurope Acrylamide infographic