

HEADING FOR BURNOUT



WHY THE FOOD INDUSTRY AND REGULATORS NEED TO WAKE UP TO THE ACRYLAMIDE CRISIS



Summary

Acrylamide is a carcinogenic chemical, found in numerous food products, such as bread, crisps, biscuits and baby food. While acrylamide occurs naturally when starch-rich foods are heated up, its presence can be significantly reduced through applying good practice by food manufacturers. Acrylamide in food has been on the agenda of public health regulators since early 2000s, when scientists first raised the alarm about its presence in food. The European Food Safety Authority (EFSA) considers acrylamide in food a public health concern as *"it potentially increases the risk of developing cancer in consumers of all ages"* and health authorities agree that *"it should be kept as low as reasonably practicable (ALARP) as no safe level of exposure has been determined"*. Since 2007 EU National Food Safety Agencies have taken a soft approach towards addressing this issue based on encouraging the food industry to adopt best practice and monitor presence of acrylamide in food. In 2014 both EFSA and the European Commission¹ concluded that there has not been a consistent trend across food groups towards lower levels of acrylamide. This voluntary approach has clearly failed.

The European Commission now intends to adopt binding measures to address the levels of acrylamide in food through a decision in the Standing Committee on Plants, Animals, Food and Feed (PAFF) in November 2016. **In order to address this public health threat, the Commission's proposal must be significantly strengthened to reflect the following:**

1. The proposal has to set ambitious maximum levels on acrylamide in different food groups and a downward trajectory in order to make sure that industry takes responsibility for reducing acrylamide levels across all food groups substantially.

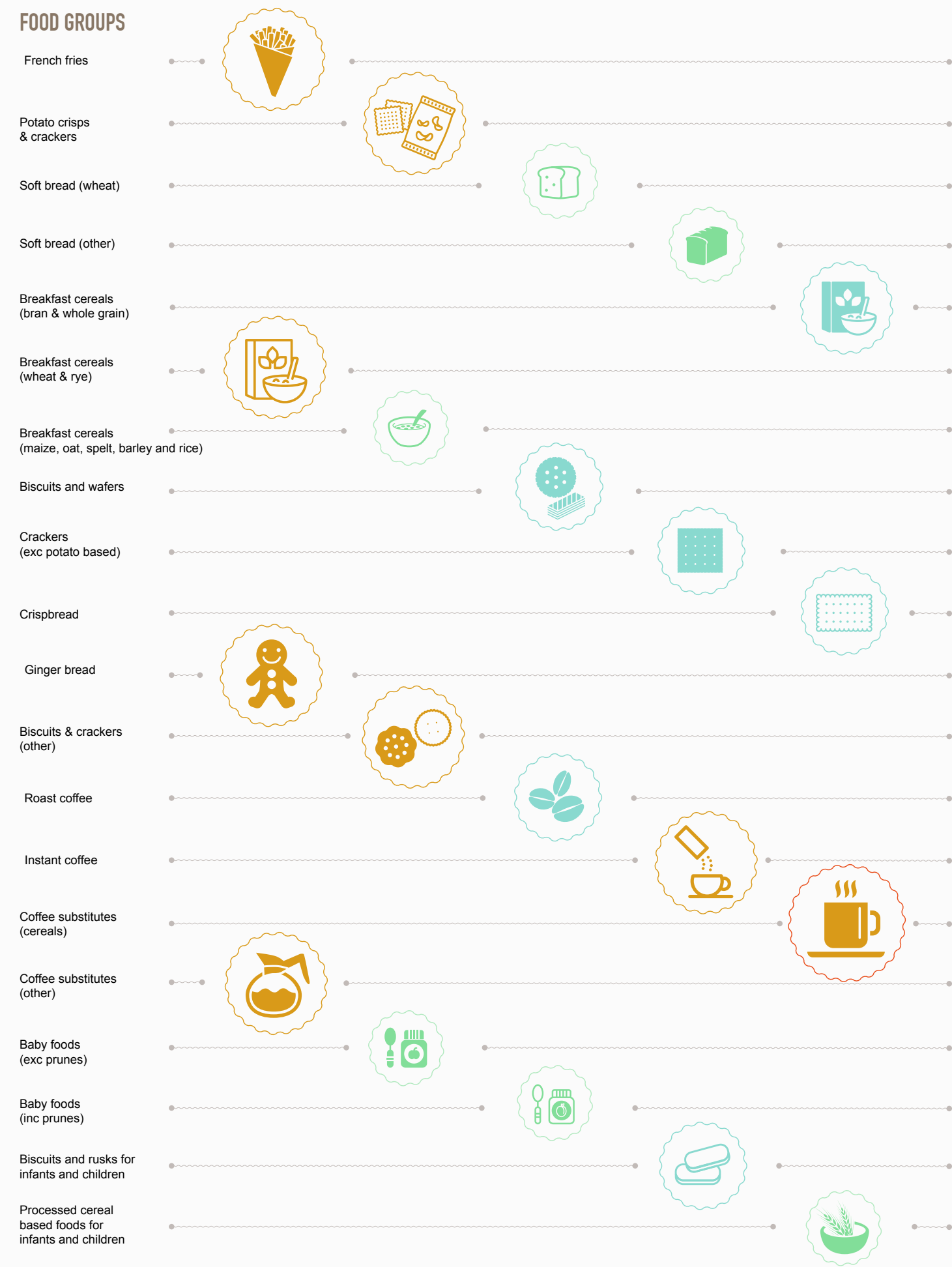
The Commission intends to maintain the current approach of indicative values, which are at the higher end of the range of acrylamide concentrations observed by EFSA and much higher than the levels reported by industry (see the table on page 3). Given the lack of effectiveness of this approach over the last five years and the confirmation by the scientific community of the health threat posed by acrylamide in food, it is shocking that the Commission does not seem to be taking this seriously. Only by making it a legal requirement for the industry to achieve ambitious reductions in the levels of acrylamide, we will ensure that it does all in its power to reduce the levels of acrylamide. This is the approach taken by other EU food safety legislation to address the presence of carcinogens in food.

2. The proposal has to strengthen the role of national Food Safety Agencies in this process by encouraging them to continue to monitor the presence of acrylamide in food products and to take legal action against irresponsible food-makers that fail to implement best practice to lower the levels of acrylamide in food.

The current proposal from the Commission puts a lot of emphasis on industry's self-monitoring of acrylamide levels in food. Given that the industry has done little to reduce the acrylamide levels in the past, it would seem more appropriate to give this role to National Food Safety regulators, who should also be encouraged to raise an EU-alert, investigate products with high levels of acrylamide and take legal action against irresponsible food operators. The setting of maximum levels on acrylamide would give such a regulative approach an additional boost.

The past years have clearly shown that relying on the industry's voluntary action has not lead to reductions in the level of acrylamide found in foods in the EU, despite health experts' agreement that these should be kept as low as reasonably practicable. In fact, investigations conducted by Member States show that many industry operators continue to be **unaware of the health risks posed by acrylamide and unwilling to implement the measures to reduce it**. The lack of industry action in this area is exposing EU consumers - including those most vulnerable such as children and infants - to unacceptable levels of acrylamide in their diet. Prolonging this weak regulatory approach, as it is currently being proposed by the Commission, will not push the industry towards lower levels of acrylamide. **The Commission has the duty to address this anomaly and propose an ambitious proposal that will genuinely protect the health of EU consumers.**

SUMMARY OF ACRYLAMIDE VALUES FOUND IN FOODS AS REPORTED TO EFSA



WHAT IS ACRYLAMIDE?

Acrylamide is a chemical that naturally forms in starchy food products such as cereals and potatoes during cooking². Acrylamide is also present in additives used in some industrial processes, such as water treatment, and in tobacco smoke. Because of its toxicity, restrictions exist on the use of acrylamide in cosmetics³, packaging⁴ and generally regarding the placing of acrylamide and acrylamide containing products on the EU market⁵. There is also a EU legal limit of 0.1 microgram per litre in drinking water⁶.

Within food products, the EU Member States have only been *monitoring* levels of acrylamide. Despite the fact that particularly high concentrations of acrylamide have been found in certain foods such as bread, breakfast cereals, biscuits, coffee, chips and crisps, there is still no regulation in place – and the draft proposal from the Commission has significant shortcomings.

INDICATIVE VALUES

EC indicative value (µg/kg)*	MS reported- mean value (µg/kg)	MS reported- upper bound (µg/kg)	Industry reported- mean value (µg/kg)	Industry reported- upper bound value (µg/kg)
600	332	1115	201	493
1000	580	1841	384	920
80	38	120	/	/
150	46	203	181	/
400	164	413	230	770
300	142	/	178	460
200	73	230	172	540
500	201	810	/	/
500	231	590	/	/
450	149	428	277	520
1000	407	1600	/	/
500	/	/	/	/
450	244	563	363	/
900	674	1133	716	1115
2000	510	/	/	/
4000	2942	/	/	/
50	21	60	15	46
80	81	/	133	/
200	115	287	97	256
50	13	/	26	86

* European Commission proposed indicative values for acrylamide levels in different food types in Commission Recommendation 2013/647/EU on investigations into levels of acrylamide in food adopted on 8 November 2013.

**EFSA summarises mean and upper bound values of acrylamide found in different food groups, as reported by Member States and by the European food industry.

Background on the upcoming EU regulation on acrylamide

Why is acrylamide a problem?

EFSA considers acrylamide in food a public health concern as it *potentially increases the risk of developing cancer in consumers of all ages*¹. The International Agency for Research on Cancer classifies acrylamide as a *probable carcinogen* and puts it in 2a category of carcinogens, which also includes glyphosate, heavy metals, nitrates and exposure to bitumen. Health Authorities agree that exposure to acrylamide should be as low as reasonably practicable (ALARP) as no safe level of exposure exists.

Although the presence of acrylamide in certain foods cannot be eliminated, good manufacturing practices and preventative measures have been identified in order to control and reduce its concentration in food. This includes controlling the storage conditions of raw materials; reducing sugar/asparagine content of raw materials through replacing or treating them with enzymes or other additives; optimising processing and heating of raw materials. This has led to the development of a code of practice for the reduction of acrylamide in food by the Codex Alimentarius Commission (CAC). In the EU, the Food and Drink Federation (an industry group) has developed an “acrylamide toolbox” for food and drink manufacturers to identify the best ways to reduce acrylamide in their products.

What is the current regulatory system and what it has achieved?

The EU Member States have been monitoring the levels of acrylamide present in a number of foods sold in their territory since 2007 under a “harmonising sampling and analytical framework”.⁷ Based on the results found, the European Commission has since adopted a set of *indicative values* for acrylamide concentrations found in certain foodstuffs that *are known to contain high acrylamide levels and/or contribute significantly to the human dietary intake*⁸.

Such indicative values have been set at the upper end of the concentrations of acrylamide typically found in foodstuffs (see the table on page 3 for more information). Exceedance of such values does not necessarily lead to enforcement action and/or the issuing of food alerts. Instead, Member States are *encouraged to investigate the production and processing methods used by food producers*⁹. It is unclear, whether this has been happening in practice.

The results so far have been disappointing, as there is no consistent trend across food groups towards lower levels of acrylamide.¹⁰ In addition, the EC has reported that the

investigations conducted by Member States highlight that level of awareness of food business operators of the acrylamide toolbox was very variable and some business operators were completely unaware of the risks associated with acrylamide altogether. Several of the food business operators, although aware of the toolbox, reported they had not implemented it because they did “*not have to comply with any legal limits; not want to cover the costs associated with its implementation; and did not have the expertise required to do so*”.

How is the decision going to be taken?

The European Commission is planning to mandate the implementation of industry best practice in November 2016. The EU process is based on the Regulation on the hygiene of foodstuffs, which allows the Commission to adopt regulatory measures through the so-called comitology procedure. The relevant Committee is called the Standing Committee on Plants, Animals, Food and Feed (PAFF), sub-section ‘Toxicological Safety of the Food Chain’. The PAFF Committee’s mandate covers the entire food supply chain - from animal health issues on the farm to the product on the consumer’s table. This Committee is supported at the Commission through DG Health and Food Safety and it is composed of the representatives from all European Member states, who have to vote on the opinions via qualified majority votes. The Commission’s measure goes through if a qualified majority of member states (according to the new rules this means 55% of member states, representing at least 65% of the total EU population) votes in favour. If the proposal is adopted, it goes to the European Parliament, who has the right to veto the proposal. No amendments are possible once the Commission has adopted the proposal – Member states can only vote in favour or against the proposal.

Why is this decision significant?

If the draft regulation is adopted, the measures will become legally binding across the EU and national governments will be prevented from setting lower or legally binding levels for acrylamide in food products placed on their markets. In fact, certain countries with stricter indicative values such as Denmark will have to be more lenient. Mandating the application of best practice *per se* without setting ambitious legally binding values will not ensure that food operators reduce acrylamide levels to what is reasonably possible. Yet the decision might be cemented for the years to come – without the possibility to move to anything more ambitious. This is therefore a critical moment to address this threat to public health and protect European consumers, especially those most vulnerable such as children and infants.

1. EC presentation <https://www.efsa.europa.eu/sites/default/files/event/documentset/141210-p13.pdf>

2. Such as frying, baking, roasting and industrial processing (at +120°C and low moisture).

3. Regulation (EC) No 1223/2009.

4. Commission Regulation (EU) No 10/2011.

5. Registration, Evaluation, Authorisation & Restriction of Chemicals (EC 1907/2006).

6. Commission Directive (EU) 2015/1787.

7. C(2007) 1873.

8. 2013/647/EU. Denmark decided to set slightly lower indicative values in 2016.

9. Form available https://www.foedevarestyrelsen.dk/SiteCollectionDocuments/25_PDF_word_filer%20til%20download/06kontor/Check%20list%20acrylamide%2018-2-2011.pdf

10. EC presentation <https://www.efsa.europa.eu/sites/default/files/event/documentset/141210-p13.pdf>