

Acrylamide content exceeds draft EU benchmark levels in many foods

By Sara Lewis

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Levels of the carcinogenic contaminant acrylamide in many foods exceed planned EU benchmark levels, according to previously unpublished data from the European Food Safety Authority (EFSA).

EFSA released the data covering results of 2015 tests across the EU, following a freedom of information request. They show one in 14 food products tested in 2015 continue to have dangerously high levels of acrylamide, which occurs naturally when starchy foods containing the precursor asparagine, like bread, potato products and baby rusks are cooked at high temperatures as a side effect of the natural browning process the Maillard reaction.

The analysis, conducted by the Changing Markets Foundation, reviewed the results of almost nine thousand laboratory tests conducted in Europe during 2015. Over 70% of these tests were implemented by the food industry and not by food safety authorities, the Foundation explains in a statement on the results.

The highest level (5887 micrograms per kilogram - mg/kg), almost six times above the European reference value, was found in a sample of potato crisps taken in Germany. A sample of biscuits taken in Spain had the second highest value (5085 mg/kg), ten times over the European benchmark for that food group.

Self-monitoring questioned

“Interestingly, it is the results from the official tests conducted by European food safety authorities that seem to identify most cases of non-compliance and detect higher levels of acrylamide,” says the organization.

“Our analysis suggests that there is a significant discrepancy between industry’s self-monitoring and official results from the European authorities,” said Nuša Urbančič, campaigns director at the Changing Markets Foundation. “This makes us question whether such self-monitoring regime is indeed delivering for public health or just covering up for the worst offenders in the industry.”

In a [June 2015 opinion](#) EFSA warned that acrylamide in food increases the risk of developing cancer in all age groups, but especially children. EFSA said that since acrylamide is present in a wide range of everyday foods, the cancer risk applies to all consumers but children are the most exposed age group on a body weight basis. The Authority also noted that the most important food groups contributing to acrylamide exposure are fried potato products, coffee, biscuits, crackers, crisp bread and soft bread.

In its statement, the Changing Markets Foundation says: “Although data suggests there has been a slight downward trend across some food categories compared to previous years, it is alarming that the highest proportion of offending products are found in categories of foods destined for babies, with one in four of all cereal based baby food samples being above the European reference level.”

Acrylamide formation can be curtailed to a certain extent by mitigation measures, such as notably only cooking foods to a light golden colour rather than dark brown, storing potatoes at over 6 degrees Celsius and choice of low asparagine crop varieties. Industry association FoodDrinkEurope has developed guidance, codes of good practice, for mitigation known as the Acrylamide Toolbox.

A draft Commission [regulation](#) currently on the legislative table would render mitigation measures mandatory, effectively require food companies to comply with the Acrylamide Toolbox using the benchmarks as indicative levels. But it is controversial as campaign groups – some MEPs and Member States - argue that there should be maximum authorised limits instead of benchmarks and that food over those levels should be pulled from the market.

The draft regulation uses EU hygiene legislation rather than contaminants law as a legal base on grounds that acrylamide is a processing contaminant so mitigation measures should be included in hazard analysis critical control points (HACCP) management. However, the contaminants legal basis would have meant legally binding maximum limits and banned any foods over those levels from the market.

The Commission seems to have won the battle on the legal basis by a promise to come forward with a second regulation setting binding maximum limits under contaminants law for product groups shown to contain high acrylamide levels and where it is especially important to protect consumer, for example with cereal-based baby foods.

Deadline for binding limits

Nevertheless, while Member States, MEPs and campaign groups such as Safe Food Advocacy Europe (SAFE) and the Changing Markets Foundation can reluctantly accept this two-stage approach, they are demanding that the Commission includes a firm timeline for action on the second regulation in the first.

A cross-party group of MEPs also wrote to four key EU Commissioners Vytenis Andriukaitis (Health and Food Safety), Vera Jourova (Justice, Consumers and Gender Equality), Phil Hogan (Agriculture and Rural Development) and Elzbieta Bienkowska (Internal Market, Industry, Entrepreneurship and SMEs) calling for a commitment and timeline for a future measure to introduce binding limits in the first regulation.

The letter seen by **EU Food Law** notes that the latest draft “fails to mention any follow-up legislation imposing maximum levels. Such levels are necessary to protect European citizens’ health against this carcinogenic and genotoxic contaminant.”

Socialists Nessa Childers from Ireland and Nicola Caputo of Italy, Greens Belgian Bart Staes and Keith Taylor from the UK join forces with Italy's Piernicola Pedicini from the Five Star Movement go on to write: "We would thus ask the Commission to make clear reference, in the first regulation, as to when it intends to propose the follow-up legislation, which would include maximum levels of acrylamide for certain food products."

Similarly, the Changing Markets Foundation's statement notes: "the most recent proposal remains silent as to whether, and if so, when such measures will be introduced." It further complains: "The proposal also keeps the bulk of monitoring of acrylamide levels firmly in the hands of industry."

"It is very concerning that babies and children continue to be exposed to high levels of acrylamide in foods destined for them," said Eoin Dubsy, campaigns manager at SumOfUs in the statement.

"Almost 250,000 Europeans are asking Commissioner Andriukaitis to put in place binding levels for acrylamide in foods as soon as possible to guarantee that consumers are protected from dangerous exposure. It's perfectly feasible and EU health officials should put public health before profits of food corporations."

SAFE Secretary General Floriana Cimmarusti agrees on the need for a clear commitment on timing to appear in the first regulation. She told **EU Food Law**: "The Commission should make clear reference on the first regulation on acrylamide in food, based on the hygiene regulation, to when it intends to propose the follow up legislation imposing maximum levels on certain foods (such as baby foods)."

The draft regulation is on the agenda for a 19 June meeting of the EU's Standing Committee on Plants, Animals, Food and Feed (PAFF) Novel Foods and Toxicological Safety of the Food Chain section. But only for a discussion as before the PAFF can vote and the Commission adopt the regulation, it first must go out for a one-month public consultation via the Commission's Better Regulation Portal, then Member States must have two weeks to consider any changes to the text as a result of comments received. This means that unless the document is posted on the portal this week, it will be impossible to have a vote before the summer recess. Although the Commission had promised a vote for June and then July, it is looking more likely to be September now.

A summary of a 27 March PAFF meeting where the draft regulation was discussed show that the Commission explained: "Benchmark levels reflect the level which can be achieved on a consistent basis by applying mitigation measures to reduce the presence of acrylamide as low as reasonably achievable. The benchmark levels to be used to measure the efficacy of the applied mitigation measures are set at a strict level taking into account the most recent occurrence data from the EFSA database."

The summary explains that under the regulation, "Food business operators are obliged to monitor the effectiveness of the mitigation measures to reduce the presence of acrylamide by sampling and analysis of their production demonstrating that the levels of acrylamide achieve the set benchmark levels."

Critically, the summary adds: “It was again confirmed that in a second phase to initiate the discussion on setting maximum levels for certain foods or food categories. This discussion shall be started immediately after the adoption of the envisaged regulatory measure obliging food business operators to apply mitigation measures. The setting of maximum levels is complementary to this measure.”

Nevertheless, the summary makes clear: “The Committee was informed that for legal reasons it is however not possible to make reference to this in the draft Regulation but this would be reflected in the report of the meeting when the envisaged regulatory measure is submitted for opinion.”

The summary says that the Committee was also told “that it would be appropriate to monitor the presence of acrylamide in foodstuffs not covered by the mitigation measures and/or benchmark levels and in which based on very few samples significant levels of acrylamide was found in order to be able to assess the extent of the presence of acrylamide in these foodstuffs.”