European Commission

Directorate-General for
# Health & Food Safety

# Background for the request of the European Commission on acrylamide in food

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# Former assessments –actions

* April 2002: detection of the presence of acrylamide in food

* July 2002: Opinion of the Scientific Committee for Food :

*" Acrylamide is a genotoxic carcinogen"*

*"The Committee is of the opinion that it is not possible at present to determine the actual risk from exposure to acrylamide in food"*

*"The Committee recommends that levels of acrylamide in food should be as low as reasonably achievable"*

→ **2002-2005**: extensive research on pathways of formation and mitigation measures and intensive exchange of information between Commission, Member States and stakeholder organisations

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# Former assessments

## JECFA evaluation in February 2005:

*"MOEs have been calculated and ranged from 75 to 300. The Committee considered these MOEs to be low for a compound that is genotoxic and carcinogenic and that they may indicate a human health concern. Therefore, appropriate efforts to reduce arylamide concentrations in foodstuffs should continue."*

## Statement of the CONTAM Panel of 19 April 2005 on the JECFA evaluation

*" The Panel agrees with the principal conclusions and recommendations of the JECFA and concludes that at present (2005) an additional evaluation by EFSA  is not necessary"*

## JECFA evaluation in February 2010

*The conclusions of 2005 were confirmed and the updated MOEs (ranging from 45 to 310) indicate a human health concern*

# Actions - industry and Codex

→ **2005**: Efforts have been undertaken by food industry since 2002 in order to reduce the levels of acrylamide in processed foods → voluntary measures were developed – CIAA acrylamide toolbox to provide guidance to help producers and processors to identify ways to lower acrylamide in their products.

→ **2005**: Codex agrees to initiate the discussions on acrylamide in food

→ **2006**: Codex decided to elaborate a Code of practice

→ **2009**: Codex adopts the "Code of practice for the reduction of acrylamide in foods (CAC/RCP 67-2009)

# Monitoring on the presence of acrylamide

→ **2007**: Commission Recommendation 2007/331/EC on the monitoring of acrylamide levels in food

3-year monitoring programme (2007 – 2009) extended by

→ **2010:** Commission Recommendation 2010/307/EU on the monitoring of acrylamide levels in food

not limited in time, regular assessment of need to continue monitoring

# Monitoring on the presence of acrylamide

Regular compilation of monitoring data by EFSA and assessment of results by Commission

→ Scientific reports of EFSA – Results on the monitoring of acrylamide in food

April 2009 – April 2010 – March 2011 – October 2012

*"The EFSA concluded in 2010 that there was no consistent trend across food groups towards lower levels of acrylamide and that a decrease in acrylamide levels was shown in only a few food categories while in other food categories an increase in the levels can be observed"*

*"The EFSA concluded in 2012 that the trend analysis showed only few changes in acrylamide levels from 2007 to 2010"*

# Investigations on increased levels

* Follow up to monitoring exercise: monitoring results 2007-2009 do not show clear trend towards lower acrylamide levels in food

* Commission Recommendation on investigations into the levels of acrylamide in food of 10.1.2011 Document C(2010) 9681 final

* Indicative levels triggering investigations until end of 2012, assessment of the results by end of 2012 – information, in particular on the status of implementation of (regularly updated) FDE toolbox/leaflets is needed.

# Investigations on increased levels of acrylamide - outcome

***Awareness of the FDE toolbox by food business operators (FBOs):***

* Among FBOs awareness of the toolbox was very variable.

While some MS reported that most of their manufacturers were aware of the toolbox, others reported that the degree of awareness was low. Some producers had some general notion of the risks related to acrylamide, others had not heard of it at all.

* Among those who were aware of the risks of acrylamide, the toolbox itself was known by some, but not by others. Generally, large manufacturers were more aware of the toolbox than small producers.

Especially the catering sector (small restaurants, pubs etc.) producing French fries ready to eat was most often unaware.

# Investigations on increased levels of acrylamide - outcome

***Implementation of the toolbox among those FBOs who were aware of the toolbox:***

In large industrial-scale manufacturers where the toolbox was well known, some elements of it had been implemented or at least tried out in studies.

Several FBOs replied that although aware of the toolbox, they had not implemented the relevant parts of it. The following reasons were given:

- HACCP plan already considers this aspect, no need for further action
- too costly to implement, laboratory testing too costly (several replies)
- there are no legal limits (several replies)
- not acceptable to make changes / organoleptic properties altered if changes to process conditions or recipees are made
- lack of expertise

# Investigations on increased levels of acrylamide - outcome

***Issues identified as regards the implementation of the toolbox by FBOs***

The exercise did not give any sort of exhaustive or quantitative information on the degree of implementation of the FDE toolbox.

However, from the information provided by the MS, it can be concluded that there are two major issues.

- The first relates to the awareness of FBOs of the risk from acrylamide and the existence of the toolbox.

- The second relates to the implementation of the toolbox itself in cases where the FBOs were aware of its existence.

# Situation end of 2012

**Situation as regards acrylamide unsatisfactory**

- no systematic decrease of levels in all relevant foodstuffs as demonstrated by the results of monitoring over the last 5 years

- implementation of FDE toolbox or other mitigation measures insufficient

→ further risk management measures needed

→ to support the discussion on the appropriate risk management measures, a comprehensive risk assessment on acrylamide in food carried out by EFSA is needed, taking into account the new scientific information available since the last assessment by JECFA.

# Situation end of 2012

→ EFSA assessment to become available by June 2015 at the latest

* Need to fill the gap from a risk management point of view between end of 2012 and mid-2015

* Decided to continue the exercise of investigations on reasons of levels of acrylamide higher than indicative values, but more targeted and with a review of the indicative levels

# Monitoring and investigations

* **Commission Recommendation 2013/647/EU** of 8 November 2013 on investigations into the levels of acrylamide in food

→ Changes indicative values for soft bread, certain breakfast cereals, crispbread, ginger bread, foods for infants and young children (including biscuits and rusks and processed cereal based foods)

-> New indicative levels for coffee substitutes, gingerbread and potato-based crackers

-> Member States should report the findings to the Commission by 31 October 2014 and by 30 April 2015.

# Workshop 13/14 January 2014 Objectives

* Every sector was asked to present in detail how the FDE-toolbox is implemented in practice in the production process.

* Each sector was asked to give concrete information on how the hazard acrylamide is managed within the HACCP system and to provide information on the critical control points, critical limits at critical control points, monitoring procedures at critical control points, corrective actions when monitoring indicates that a critical control point is not under control (Article 5 of Regulation (EC) No 852/2004).

# Workshop 13/14 January 2014 Objectives

Consumer organisations were asked to present their initiatives/campaigns towards consumers to make them aware of the good cooking practices to keep acrylamide levels in home prepared foods as low as possible.

# Workshop 13/14 January Outcome

* the major importance of the breeding and agricultural sector was highlighted to control the presence of acrylamide in potato and cereal-based food (low asparagine, low reducing sugar content, fertilisation, storage …)
* sectors provided the requested information at a varying extent of detail (from very detailed to very general)
* presentation by authorities

Detailed report available at http://ec.europa.eu/food/committees/regulatory/scfcah/toxic/docs/sum_20140220_en.pdf

# Acrylamide – Outlook risk management

**Objectives of risk management measures**

* to ensure a **general application by all relevant food business operators of mitigation measures** to reduce the presence of acrylamide in food as much as possible to provide a high level of human health protection

* to ensure that **efforts are done in the whole chain:** breeding – agriculture – food processing – catering - consumers (home cooking)

# Acrylamide – Outlook risk management

## Considerations

* detection of presence in food nearly 13 years ago.
* generally sufficient knowledge on pathways of formation and mitigation
* generally sufficient monitoring data available
* current situation unsatisfactory as regards the implementation of the mitigation measures to reduce the presence of acrylamide in food
* last but not least, comprehensive risk assessment on acrylamide (nearly) available

# Acrylamide – Outlook risk management

**→ Further risk management measures to be established at EU level to ensure that acrylamide levels in food are consistently as low as reasonably achievable by the application of the appropriate mitigation measures by all food business operators all along the food chain !**


# THANK YOU FOR YOUR ATTENTION !