Check list for follow up on acrylamide levels according to Commission Recommendation (Document C/2010/9681)  
Version: 18.2.2011

Sample No. ______________

1. Detailed product description:
Brand name and product name:
............................................................................................................................................
Product description and main ingredients according to label (e.g. type of bread, type of grain for cereal products, etc.)
............................................................................................................................................
............................................................................................................................................
............................................................................................................................................
Batch/lot No: ........................................Production date: .....................BBE/Use By................

2. Analytical Information:
Acrylamide level found: .........................µg/kg   Measurement uncertainty: +/- .............µg/kg
Method of analysis (tick one)
☐ LC/MS ☐ GC/MS Accredited (ISO 17025):   Yes ☐ No ☐
Sampling Point (tick one)
☐ Single retail ☐ Production site

3. Production type (tick one):
☐ Restaurant (ready to eat incl. take-away/fast food outlet etc)
☐ Large scale manufacture ☐ Small scale manufacture (i.e. artisan/cottage industry)
☐ Wholesaler

4. Product type (tick one):

Potato products:
☐ French fries ready to eat ☐ Potato crisps
☐ Other potato products (please specify)...........................................................................

For potato products please use Annex 1.

Please complete all questions relevant to the product. If information is not available please state why or n/a as appropriate.
**Cereal products**

- [ ] Soft bread
- [ ] Crisp bread
- [ ] Breakfast cereals (excl. Muesli)
- [ ] Biscuits, crackers, wafers and similar (excl. gingerbread)
- [ ] Other cereal products (please specify)

For cereal products please use Annex 2.

**Coffee**

- [ ] Roasted coffee
- [ ] Instant (soluble) coffee
- [ ] Coffee substitutes
- [ ] Other coffee products (please specify)

For coffee please use Annex 3.

**Products for infants and young children**

- [ ] Biscuits and rusks for infants and young children (please use Annex 2)
- [ ] Processed cereal based foods for infants and young children, (excl. biscuits and rusks)(please use Annex 2)
- [ ] Baby foods, other than processed cereal based baby foods (please use Annex 4). Relevant parts of Annex 1 should also be filled in if potatoes are a major ingredient.

**5. Knowledge and implementation of CIAA acrylamide toolbox**

Is food business operator (FBO) aware of the acrylamide toolbox?  
Yes [ ] No [ ]

Are tools for reduction of acrylamide proposed in the toolbox for this product?  
Yes [ ] No [ ]

If yes, have the relevant processing steps susceptible for the formation of acrylamide been identified as part of a HACCP or similar system?  
Yes [ ] No [ ]

Are they considered CCPs? If not, how else are they addressed and controlled in the context of a HACCP or similar system?

..................................................................................................................................................

..................................................................................................................................................

Please complete all questions relevant to the product. If information is not available please state why or n/a as appropriate.
Please specify which parts of the Toolbox have been implemented, if appropriate.

If FBO aware of the tool box, but has not implemented yet, then why not?

- Cost
- Lack of expertise
- Effect on product
- Time
- Other, please specify:

Staff training programme
- Yes
- No

Is the FBO following the ALARA principle for ongoing minimisation?
- Yes
- No
  If yes, how?

6. Additional information:

Does FBO have data to indicate the usual range of acrylamide for this product?
- Yes
- No

Is the finding within the normal range for the product (for this FBO)?
- Yes
- No

Normal range: \( \mu g/kg \)  Mean: \( \mu g/kg \)  Measurement uncertainty: +/- \( \mu g/kg \)

Has the acrylamide indicative values been exceeded previously for this product?
- Yes
- No

Method of analysis (tick one)
- LC/MS
- GC/MS

Additional comments of the FBO that may be of interest as regards acrylamide reduction:

Please complete all questions relevant to the product. If information is not available please state why or n/a as appropriate.
Annex 1  Potato Products

Starting Ingredient:
Starting material fresh potatoes  ☐ Processed potato ingredient e.g. potato dough  ☐
Fresh pre-fabricates for French fries  ☐ Frozen pre-fabricates for French fries  ☐

Cooking method:
Oven cooked  ☐ Batch fried  ☐
Continuously fried (crisps)  ☐ Other  ☐ specify………………………………………

Preparation/Production details:
Potato variety ..................................................Fresh harvested  ☐ Stored  ☐

Time/temperature of processing: Please fill in the time/temperature recording sheet as provided in Annex 5.

Long term storage temperatures for raw materials (potatoes)..............................°C
(if not known please give supplier details if possible……………………………………….)

Test for reducing sugar (fructose and glucose) content in raw materials (potatoes)
   Yes  ☐ No  ☐ Not relevant  ☐
If yes, reducing sugar content:......................g/kg fresh weight

Pre-treatment like blanching, soaking, par frying, etc.?
   Yes  ☐ No  ☐ Not relevant  ☐ Specify…………………………………………………

Focus on colour of product?
   Yes  ☐ Colour Test (result/unit).............../......  No  ☐
   Not relevant  ☐

Is there a focus on product thickness? What cut size (fries)?
   Yes  ☐ No  ☐ Thin / Medium/ Thick (circle)  Not relevant  ☐

Use of enzymes to reduce acrylamide (asparaginase)?
   Yes  ☐ No  ☐ If not, why? ………………………………………

Focus on final moisture content?
   Yes  ☐ No  ☐ Not relevant  ☐

Additional additives / processing aids?
   Calcium salts  ☐ Citric acid  ☐ Other  ☐ specify…………………………

Removal of fines (fine pieces of potato) before or after frying?

Please complete all questions relevant to the product. If information is not available please state why or n/a as appropriate.
Known level of acrylamide already present in major ingredients? Yes ☐ No ☐
If Yes, what ingredient? ……………………………… level? ………………………………µg/kg

Substitute ingredients (please list with %). ……………………………………………………………………………
If relevant, please give information on:
Portion size cooked ………………………
Fryer Power / Size ……………………………

**Conclusion**

Will adjustments in the recipe or production be investigated, and implemented where appropriate, with the aim to reduce formation of acrylamide?
Yes ☐ No ☐
If yes, which: ………………………………………………………………………………………………………………….
If not, reasons: ……………………………………………………………………………………………………………….

Please complete all questions relevant to the product. If information is not available please state why or n/a as appropriate.
Annex 2  Cereal Products

Preparation/Production details:

Cooking Process
Oven cooked (batch)  [ ]  Oven Cooked (continuous)  [ ]
Other  [ ]
Specify………………………………………..

Time/temperature of processing: Please fill in the time/temperature recording sheet as provided in Annex 5.

Are reducing sugar(s) (fructose and glucose) used in the recipe?
Yes  [ ]  No  [ ]  Not relevant  [ ]

If yes, reducing sugar content:………………………………………..g/kg

Which cereal grain is mainly used?:
Wheat  [ ]  Oat  [ ]  Maize  [ ]  Barley  [ ]  Rye  [ ]  Rice  [ ]  Other  [ ]
Variety/ies?...........................................................................................................

Use of wholemeal flour?
Yes  [ ]  No  [ ]  Not relevant  [ ]

Fibre content as % of total ingredients ………………………

Whole grains used as % of total ingredients……………………

Known level of acrylamide already present in major ingredients?  Yes  [ ]  No  [ ]
If Yes, what ingredient?…………………….level?…_______..µg/kg

Use of raising agent?.
No  [ ]  Ammonium bicarbonate  [ ]  Other  [ ]  Specify………………………………

Focus on use of fructose?
Yes  [ ]  No  [ ]  Not relevant  [ ]

Focus on product thickness?
Yes  [ ]  No  [ ]  Not relevant  [ ]

Use of enzymes to reduce acrylamide (asparaginase)?
Yes  [ ]  No  [ ]  If not, why? …………………………………………………

Focus on final moisture content?

Please complete all questions relevant to the product. If information is not available please state why or n/a as appropriate.
Please complete all questions relevant to the product. If information is not available please state why or n/a as appropriate.

Focus on ingredients, e.g. roasted almonds, etc?

Yes  ☐  No  ☐  Not relevant  ☐

Focus on the degree of baking?

Yes  ☐  No  ☐  Not relevant  ☐  Comment?..............................

Fermentation step in process?

Yes  ☐  No  ☐

Additional additives / processing aids?

Calcium salts  ☐  Citric acid  ☐  Other  ☐ (specify)......................

**Conclusion**

Will adjustments in the recipe or production be investigated, and implemented where appropriate, with the aim to reduce formation of acrylamide?

Yes  ☐  No  ☐

If yes, which:...........................................................................

If not, reasons:........................................................................
Annex 3  

Coffee

Preparation/Production details:

Degree of roasting:  Light  ☐  Medium  ☐  Dark  ☐

Sold as:  Beans  ☐  Ground  ☐  Instant  ☐

Decaffeinated:  Yes  ☐  No  ☐

Grind size:  Coarse  ☐  Medium  ☐  Fine  ☐

Arabica/Robusta........../........%  

Time/temperature of processing:  Please fill in the time/temperature recording sheet as provided in Annex 5.

Age of analysed sample:  ....................................(days/months)

Long term storage temperatures for raw materials (beans)............................°C (if known)

Pre-treatment like blanching, soaking, etc.

Yes  ☐  No  ☐  Not relevant  ☐  Specify......................................................

Use of enzymes to reduce acrylamide (asparaginase)

Yes  ☐  No  ☐  If not, why?  .................................................................

Other control measure?...........................................................................

Conclusion

Will adjustments in the recipe or production be investigated, and implemented where appropriate, with the aim to reduce formation of acrylamide?

Yes  ☐  No  ☐

If yes, which:..........................................................................................

If not, reasons:.........................................................................................
Annex 4  Infant and young children

For biscuits and rusks for infants and young children as well as for processed cereal based foods for infants and young children, please use Annex 2.

For other baby foods, please use this Annex 4. If potatoes are a major ingredient please also fill in relevant parts of Annex 1.

Preparation/Production details:
Time/temperature of processing: Please fill in the time/temperature recording sheet as provided in Annex 5.

Main ingredients of baby food in decreasing order of importance:

………………………………………………

Known level of acrylamide already present in major ingredients? Yes ☐ No ☐
If Yes, what ingredient?……………………level?..........._______µg/kg

Conclusion
Will adjustments in the recipe or production be investigated, and implemented where appropriate, with the aim to reduce formation of acrylamide?

Yes ☐ No ☐

If yes, which:………………………………………………………………………………………………
If not, reasons:…………………………………………………………………………………………
Annex 5: Time/Temperature recording sheet

Please complete either of the following tables as relevant for the product.

<table>
<thead>
<tr>
<th>Heat Treatment Step (short process description)</th>
<th>Typical Residence Time or cooking time (mins)</th>
<th>Operating Temperature Range (air, oil, etc) (tick all relevant zones for the process/product)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>≤120°C</td>
</tr>
<tr>
<td>1.</td>
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<td>2.</td>
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<td>3.</td>
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<td>4.</td>
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<tr>
<td>5.</td>
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</tbody>
</table>

If the product is produced using a flow cook fry process and it is considered by the FBO that the following format is more relevant and they would prefer to give information in this way then please complete instead of the table above. You may complete either or both accordingly.

- in-feed oil temperature ................................°C
- out-feed oil temperature .................................°C
- Exposure time...............................................minutes

Please complete all questions relevant to the product. If information is not available please state why or n/a as appropriate.