FEDIOL code of practice on the safety of vegetable oils and fats products for feed and food with regard to dioxin and dioxin-like PCBs

FEDIOL published its code on the safety of feed with regard to dioxin in March 2011 so as to respond to the call by the Commission services to develop an approach on enhanced monitoring of dioxin and dioxin-like PCBs in oils and fats products for feed application. One year later, in March 2012, Commission Regulation 225/2012 amending Annex II to Regulation 183/2005 as regards dioxin in oils and fats products for feed was published. The new legal dioxin provisions applied six months later, in September 2012 and will be evaluated by 16 March 2014 latest. The FEDIOL code should facilitate data gathering so as to support any future obligatory dioxin testing follow a risk-based approach. A year of gathering data on dioxin prevalence in the oils and fats products of oilseed crushing and oil refining gave a basis to FEDIOL to evaluate and amend its code of March 2011.

This FEDIOL voluntary Code covers the crushing of oilseeds and refining of vegetable oils and fats, the process which is outlined in the chart under Annex I. FEDIOL represents 85% of EU’s crushing and refining capacities.

This code consists of the elements as listed below:

1. **Enhanced monitoring scheme on dioxins and dioxin-like PCBs**
The enhanced monitoring scheme for the analysis of samples taken in the vegetable oilseeds crushing and vegetable oils and fats refining industry is contained in Annex II. This scheme is reflecting the 2011-2013 data gathering as conducted under this code, the conclusions of which are available at FEDIOL. On top of this, the scheme is also reflecting testing frequencies as legally applicable.

2. **Precautionary exclusion of products for use in feed**
Annex III indicates which products are voluntary banned by FEDIOL companies from the use for feed applications, because their feed safety cannot be guaranteed.

3. **Products requiring additional processing**
Annex III also indicates which products require an additional cleaning step before they can be applied for feed.

4. **Clear product labelling**
FEDIOL proposes a uniform and clear approach to the labelling of vegetable oils and fats (/products) in order to ensure proper handling in the supply chain and to minimize risk (Annex III).

This revised code is applying as of November 2013.
Annex I Flow charts refining; chemical and physical

Refinery - Chemical

Crude oil

Degumming

Gums -> lecithin
No evidence for concentration

Neutralization

Acid oils (formerly fatty acids)
No evidence for concentration

Bleaching (in combination with AC)

Deodorizing

Deodistillate (formerly distillates)
Concentration

Refined Oil
Refinery - Physical

- Crude oil
  - Degumming
    - Gums -> lecithin
      - No evidence for concentration
    - Bleaching
    - Deodorizing
      - Refined Oil
  - Fatty Acid Destillate = 100% monitoring
    - Concentration
      - Hydrogenation
      - Hydrogenated fatty acid distillate
Annex II: Monitoring scheme on dioxins and dioxin-like PCBs

1.0 Scope
The monitoring scheme covers the oils and fats products from oilseeds processing and vegetable oils and fats refining applied for feed.

2.0 Analysis
For feed products: Analysis should be performed by officially recognized methods of analysis as laid down in Commission Regulation 278/2012 (amending Regulation 152/2009), as regards the determination of the levels of dioxins and polychlorinated biphenyls in feed products."

“For foodstuffs: Analysis should be performed by official recognized methods of analysis as laid down in Commission Regulation (EU) 252/2012, laying down methods of sampling and analysis for the official control of levels dioxins, dioxin-like PCB’s and non-dioxin-like PCB’s in certain foodstuffs (repealing Regulation (EC) 1883/2006).

3.0 Monitoring frequency
Companies will apply 100% monitoring on products in which dioxins may have been concentrated during processing.

Companies will conduct at least a half yearly monitoring on products where dioxin and dioxin like PCBs is not found to exceed the legal limit as shown by monitoring. Based on risk assessment, companies can apply more frequent testing.

The above results in monitoring frequencies per type of vegetable oils and fats product as outlined in the table below.
<table>
<thead>
<tr>
<th></th>
<th>Regulation 225/2012</th>
<th>FEDIOL code (11SAF82rev.6)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pressing and extraction</strong></td>
<td></td>
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<tr>
<td>Crude oil (excluding coconut oil)</td>
<td>-</td>
<td>Half yearly</td>
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<tr>
<td>Crude lecithins, gums</td>
<td></td>
<td>Half yearly</td>
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<tr>
<td><strong>Refining</strong></td>
<td></td>
<td></td>
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<tr>
<td>Refined oil/fat and products derived thereof</td>
<td>-</td>
<td>Half yearly</td>
</tr>
<tr>
<td><strong>Physical refining</strong></td>
<td></td>
<td></td>
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<tr>
<td>Fatty acid distillates</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Chemical refining</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soap stock or fatty acids/acid oils (excluding those of coconut)</td>
<td>100%</td>
<td>100%</td>
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<tr>
<td>Deo-</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Products derived from vegetable oils and fats during pressing, extraction, physical and chemical refining other than those mentioned above</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>
4.0 Batch size
The batch size of the products that are subject to the revised Annex II to Regulation 183/2005 is max 1,000 mtons (section Quality Control, point 2a), unless it can be demonstrated that a homogeneous consignment is bigger than such weight (section Quality control, point 3). If such consignment has been sampled in a representative way, then the results of the analysis of the appropriately drawn and sealed sample will be considered accepted.

This table is further specified below.

5.0 Submission of proof of analysis to the customer
The customer shall have written proof that products that are subject to the revised Annex II to Regulation 183/2005 have been analysed on dioxin. This proof must be traceable.
Point 5 of the above Annex says “Any delivery of products referred to under points 2(d)(i), (e)(i) and (f)(i) shall be accompanied by a proof that these products have been analysed [...]” In case the supplier and the receiver choose to agree on the supplier delivering this proof, this does not rule out that the receiver accepts the delivery of the product prior such proof becoming known.

6.0 Data collection
All monitoring results will be collected by FEDIOL, as indicated in the Outline on FEDIOL Database on dioxin data, Ref 11SAF071 rev.2.

7.0 Evaluation
By July 2014 the above risk classification and also the above analysis frequencies per type of product will be subject to evaluation.
# 1 Crushing of oil seeds and refining of oils

<table>
<thead>
<tr>
<th>Processes and products&lt;sup&gt;1&lt;/sup&gt;</th>
<th>Description</th>
<th>Palm</th>
<th>Palm kernel</th>
<th>Rape seed</th>
<th>Soya bean</th>
<th>Sunflower seed</th>
<th>Coconut&lt;sup&gt;2&lt;/sup&gt;</th>
<th>Groundnut</th>
<th>Linseed</th>
<th>Maize</th>
<th>Shea kernel</th>
<th>Safflower</th>
<th>Sesame</th>
<th>Walnut</th>
<th>Castor bean</th>
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</thead>
<tbody>
<tr>
<td><strong>Pressing and extraction</strong></td>
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<tr>
<td>Crude oil/fat</td>
<td>Oils and fats from pressing/extraction</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<td><strong>General</strong></td>
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<tr>
<td><strong>Degumming</strong></td>
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<tr>
<td>(partially) degummed oil/fat</td>
<td>Oils treated to remove gums/lecithin</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<td>Lecithin</td>
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<td><strong>Physical refining</strong></td>
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<tr>
<td>Refined oil/fat and products derived thereof</td>
<td>Oils/fats treated to remove colour, odour and off taste</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Fatty acid distillates&lt;sup&gt;3&lt;/sup&gt;</td>
<td>Distillate from deodorization of physical refining</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<td>X</td>
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<tr>
<td>Hydrogenated palm fatty acid distillates</td>
<td>Palm fatty acid distillate, hydrogenated</td>
<td>X</td>
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<tr>
<td><strong>Chemical refining</strong></td>
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<tr>
<td>Refined oil/fat and products derived thereof</td>
<td>Oils/fats treated to remove colour, odour and off taste</td>
<td>X</td>
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<tr>
<td>Soap stock and acid oils</td>
<td>Caustic soda refining and soap stock splitting</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Deodistillates&lt;sup&gt;3&lt;/sup&gt;</td>
<td>Distillate from deodorization after chemical refining</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<td>X</td>
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<tr>
<td>Products derived from vegetable oils, other than those mentioned in this table</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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</tbody>
</table>

- <sup>1</sup>In case of mixing of products (for instance by products from physical and chemical refining) the monitoring regime of the fraction with the highest monitoring frequency applies
- <sup>2</sup>Dioxin can be present in crude coconut oil. The source can be environmental pollution.
- <sup>3</sup>Deodistillates from chemical refining are not to be sold for feed applications, unless dioxin analysis shows that this product complies with legal limits set (See §5.0 Submission of proof of analysis to the customer)
- <sup>4</sup>FEDIOL makes a distinction between two different types of fatty acid distillates: manufactured with and manufactured without a validated dioxin removal step

<table>
<thead>
<tr>
<th>Monitoring frequency:</th>
<th>100% monitoring</th>
<th>Once every six months</th>
</tr>
</thead>
</table>

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Annex III Labelling of vegetable oils and fats (/products) sold to third parties by oilseed crushing and vegetable oils and fats refining companies

The labelling of oils and fats products as referred to below is to appear on all relevant documents, including contracts and shipping documents.

A. Products not suitable for food or feed use
An example of the labelling can be the following:

“Name of Product” and in addition the notice “not suitable for use in the Food or Feed Chain” and at a minimum batch/lot number & Manufacturer’s name and address.

Contracts should refer to the following: The goods described under and sold pursuant to this contract of sale are not for “food” or “feed” purposes. The Buyer hereby agrees not to use the goods in any food or feed application, either directly or after any further processing of the goods. In case of resale of the goods, buyer agrees to include this clause in any contract for the sale of all or any of such goods including this obligation.

The requirements under REACH and CLP regulations when selling products for non-food, non-feed applications are to be met as well.

B. Further processing required to comply with Food/Feed Law
An example of the labelling can be the following:

“Name of Product” and in addition the notice “requires further processing to meet EU Feed/Food Law requirements”.

Contracts should refer to the following: The goods described under and sold pursuant to this contract of sale are not “food” or “feed”. The Buyer hereby agrees not to use the goods in any food or feed application, either directly or without further processing of the goods. In case of resale of the goods, buyer agrees to include this clause in any contract for the sale of all or any of such goods including this obligation.

C. Feed
- “Name of Product” as listed under the EU Feed Catalogue and in addition the term “Feed Material” plus all relevant labelling information required under Regulation N° 767/2009