Regulations of Food Processing Aids in Mainland China

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July 29th, 2015   Taipei
Agenda

Legislation History

Overview of Current Regulations

Future Work
Current Food Safety Supervision System

State Council

CFDA (Food Safety Office)
- Food safety control policy making and enforcement supervision; Food safety information communication; Functional food management
  - Food Dept. I (Manufacturing Supervision)
  - Food Dept. II (Distribution and Food Service Supervision)
  - Food Dept. III (Risk Surveillance & Warning; Risk Communication; Functional Food Supervision)

NHFPC (Former MOH)
- Food safety standard; Food safety risk assessment; Foodborne illness
  - Food Safety Std., Risk Surveillance & Assessment Dept.
  - CFSA
  - CDC

AQSIQ
- Import & export food safety; packaging safety
  - Food Safety Std., Risk Surveillance & Assessment Dept.
  - Import & Export Food Safety Bureau

MOA
- Primary agricultural product food safety control; Pesticides & veterinary drugs; Animal feed; GMO; Slaughter house
  - Product Quality & Safety Supervision Bureau

Product Quality & Safety Supervision Bureau

Regulations of Food Processing Aids in Mainland China
Food Safety Regulation System

- Food safety law
  - Food safety law implementation rules
    - Ministry Regulations
      - Administrative rules
      - Circulars
    - Food safety standards
      - Horizontal standards
      - Product standards
      - Testing methods
      - GHPs

Administrative Measures

Technical Regulations
Food Additive Standards

- Uses Std.
  - Uses of Food Additives (GB2760)
  - Uses of Fortified Substances (GB14880)
  - Specifications for Each Food Additive
  - Blended Food Additives (GB26687)
  - Food Enzyme Preparations (GB25594)
- Product Std.
  - Food Flavorings (GB30616)
  - Food Flavoring Substances (GB29938)
  - Gum Base (GB29987)
- Labeling Std.
  - Food Additive Labeling (GB29924)
- GHP Std.
  - Food Additive Production Practice
Milestones of Food Processing Aids Legislation

- In 1986, MOH defined the food processing aid and included the provisions for uses of food processing aids in GB2760-1986 (Hygienic Standard for Uses of Food Additives).
- In 1996, MOH started to regulate the food processing aids through the positive list, developing the list of permitted food processing aids in GB2760-1996.
- In 2009, when revising the GB2760-2007, MOH conducted the food industry survey on the uses of processing aids.
- In 2011, MOH added the using scope and the maximum using level of food processing aids into the list of permitted food processing aids in GB2760-2011.
The China Food Safety Law 2009 empowers MOH to develop an integrated food safety standard system. The outcomes for food processing aids are:

- In 2009-2015, MOH developed and revised the specification standards for each food processing aid.
- In 2013, MOH published the standard for food additive labeling.
- In 2013, MOH started to develop the standard for food additive production practice.
- In 2014, NHFPC (former MOH) published the updated version of the standard for uses of food additives (GB2760-2014).
The China Food Safety Law 2009 requires the food additive producer to get the food additive production license before starting the production.

The China Food Safety Law 2009 stipulates the imported food additive should be in compliance with China food safety standard and cannot be released by the Customs until the CIQ hygiene certificate is available.
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Legislation History

Overview of Current Regulations

Future Work
Definitions

- **Food Additive**
  An artificially chemosynthetic or natural substance to be added to foods in order to improve food quality, color, fragrance and taste, and for the purpose of preservation and processing technology. Flavoring substances, gum-based substances, processing aids for food industry use are also included in food additives.

- **Food Processing Aid**
  The various kinds of substances to enable food processing to go smoothly, irrelative to food itself, for example, filtration aids, clarifiers, absorbents, lubricants, mold release agents, decoloring agents, peeling agents, extraction solvents, and nutritional substances for fermentation, etc.
Principles for Uses of Food Processing Aids

- Processing aids shall be used in the course of food processing with necessity, and shall reduce the dosage as far as possible under the precondition of reaching the desired effect.

- The processing aid shall be generally removed before the finalized products, if impossible to remove it completely, the residue quantity shall be minimized, where the residue limit shall not have an adverse effect on health and shall not play the functional role in final products.

- The processing aid shall meet relevant specification requirements.
Table C.1 List of the Processing Aids Permitted in Processing of Various Kinds of Foods, and No Restriction of the Residue Level (excluding Enzyme Preparation)

<table>
<thead>
<tr>
<th>No.</th>
<th>English Name of the Processing Aid</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Ammonia</td>
</tr>
<tr>
<td>2.</td>
<td>Glycerine (glycerol)</td>
</tr>
<tr>
<td>3.</td>
<td>Acetone</td>
</tr>
<tr>
<td>4.</td>
<td>Propane</td>
</tr>
<tr>
<td>5.</td>
<td>Mono- and diglycerides of fatty acids</td>
</tr>
<tr>
<td>6.</td>
<td>Nitrogen</td>
</tr>
<tr>
<td>7.</td>
<td>Silicon dioxide</td>
</tr>
<tr>
<td>8.</td>
<td>Carbon dioxide</td>
</tr>
<tr>
<td>9.</td>
<td>Diatomaceous earth</td>
</tr>
<tr>
<td>10.</td>
<td>Hydrogen peroxide</td>
</tr>
</tbody>
</table>
Table C.2 List of the Processing Aids that Require Clarification of the Functions and Scope of Use (excluding Enzyme preparation)

<table>
<thead>
<tr>
<th>No.</th>
<th>English Name</th>
<th>Function</th>
<th>Scope of Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>1,2-dichloroethane</td>
<td>Solvent for withdrawal</td>
<td>Coffee and tea processing</td>
</tr>
<tr>
<td>2.</td>
<td>1-butanol</td>
<td>Solvent for extraction</td>
<td>Fermentation</td>
</tr>
<tr>
<td>3.</td>
<td>Solvent No. 6</td>
<td>Solvent for oil impregnation, solvent for withdrawal</td>
<td>Fermentation and withdrawal</td>
</tr>
<tr>
<td>4.</td>
<td>D-mannitol</td>
<td>Anti-sticking agent</td>
<td>Candy processing</td>
</tr>
<tr>
<td>5.</td>
<td>DL-disodium malate</td>
<td>Nutrient for fermentation</td>
<td>Fermentation</td>
</tr>
<tr>
<td>6.</td>
<td>L-malic acid</td>
<td>Nutrient for fermentation</td>
<td>Fermentation</td>
</tr>
<tr>
<td>7.</td>
<td>B-cyclodextrin</td>
<td>Solvent for cholesterol withdrawal</td>
<td>Processing of pasteurized milk, sterilized milk, modified milk, fermented milk and flavored fermented milk, cream and analogues, cheese and processed cheese</td>
</tr>
</tbody>
</table>
# Provisions for Uses of Food Processing Aids (3)

## Table C.3 List of Enzyme Preparation for Foods and Their Sources

<table>
<thead>
<tr>
<th>Serial No.</th>
<th>Enzyme</th>
<th>Source(^a)</th>
<th>Donor(^b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Alpha-galactosidase</td>
<td><em>Aspergillus niger</em></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>Bacillus licheniformis</em></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>Bacillus licheniformis</em></td>
<td><em>Bacillus licheniformis</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>Bacillus licheniformis</em></td>
<td><em>Bacillus stearothermophilus</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>Aspergillus niger</em></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>Bacillus amyloliquefaciens</em></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>Bacillus subtilis</em></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>Bacillus subtilis</em></td>
<td><em>Bacillus stearothermophilus</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>Rhizopus oryzae</em></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>Aspergillus oryzae</em></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>Bacillus stearothermophilus</em></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hog or bovine pancreas</td>
<td></td>
</tr>
</tbody>
</table>

\(^a\) Source of enzyme preparation

\(^b\) Donor of enzyme preparation
Specifications include:

- Manufacturing Process
- Chemical Formula, Relative Molecular Weight
- Sensory Requirements
- Physical and Chemical Criteria
- Microbial Criteria
- Testing Methods
- Etc.
It is NHPFC who is in charge of new food processing aid approval. However, when the application is related to new GMO, it should go to MOA first.

New food processing aid approval includes the approval for:

- The new food processing aid not listed in GB2760-2014; and
- Expanding the using scope and the maximum using level of listed food processing aids.

When the application is approved, it will be published in the form of NHFPC Circular.

The management of new food processing aid is to be changed.
CFDA Regulation on Food Production Permit

- The regulation is applicable to food additives including food processing aids.
- The approval is based on products.
- The Permit is valid for 5 years.
- Local governments do the inspection periodically.
- Applicable food safety standards:
  - Specification standard for each food processing aid
  - Standard for food additive labeling
  - Standard for food additive production practice
For the imported food using food processing aid during the food production outside of China, its use of food processing aid should be in compliance with GB2760-2014.

No need to label the name of food processing aid on the food label.

The food processing aid should be imported as food additive and the CIQ hygiene certificate is required.
Agenda

Legislation History

Overview of Current Regulations

Future Work
Further Work

- Further studies and industry survey needs to be done for the risk assessment of uses of food processing aids and the development of residue levels for some food processing aids when necessary.
- Develop the testing method for the residues of some food processing aids.
- Review the current list of permitted food processing aids and manage the list dynamically.
- Well manage the use of the same production line to produce food processing aids and chemical products.
- Clarify the GMO approval process for new enzyme application.
- Develop the regulation on uses of secondary food additives in food additive preparations including enzyme preparations.
Thanks