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Maize oil

玉米油

[Including 2019XG1]

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Maize oil

1 Scope

This standard specifies the terms and definitions, classification, basic composition and main physical parameters, quality requirements, inspection methods and rules, labeling, packaging, storage, transportation, sales of maize oil.

This standard applies to finished product of maize oil and crude maize oil.

The quality indicators for crude maize oil only apply to the trade of crude maize oil.

2 Normative references

The following documents are essential to the application of this document. For the dated documents, only the versions with the dates indicated are applicable to this document; for the undated documents, only the latest version (including all the amendments) is applicable to this standard.

GB 2716 Hygienic standard for edible vegetable oil

GB 2760 National food safety standard - Standards for uses of food additives

GB 2761 National food safety standards - Maximum levels of mycotoxins in foods

GB 2762 National food safety standard - Maximum levels of contaminants in foods

GB 2763 National food safety standard - Maximum residue limits for pesticides in food

GB/T 5009.37 Method for analysis of hygienic standard of edible oils

GB 5009.168 National food safety standard - Determination of fatty acid in foods

GB 5009.229 National food safety standard - Determination of acid value in food

GB 5009.236 National food safety standard - Animal and vegetable fats and oils - Determination of moisture and volatile matter

GB/T 5524 Animal and vegetable fats and oils - Sampling

GB/T 5525 Vegetable fats and oils - Method for identification of transparency odor

and flavor

GB/T 5526 Inspection of vegetable oils; Methods for determination of specific gravity

GB/T 5531 Inspection of grain and oils - Heating test of vegetable fats and oils

GB/T 5533 Inspection of grain and oils - Determination of soap content in vegetable oils

GB 7718 National food safety standard - Standard for nutrition labelling of prepackaged foods

GB/T 15688 Animal and vegetable fats and oils - Determination of insoluble impurities content

GB/T 17374 Sales package of edible vegetable oil

GB/T 17756-1999 Sales package of edible vegetable oil

GB/T 20795 Determination of smoking point for vegetable fats and oils

GB/T 25223 Animal and vegetable fats and oils - Determination of individual and total sterols contents - Gas chromatographic method

GB 28050 National food safety standard - Nutrition label standards of pre-packaged food

3 Terms and definitions

The following terms and definitions apply to this document.

3.1

Maize oil

Oil products, which are prepared from corn germ (including: corn germ and a small amount of corn husk and corn endosperm).

3.2

Crude maize oil

Oil products, which are made from corn embryos AND cannot be directly eaten by humans.

3.3

Finished product of maize oil

Processed oils for human consumption.

3.3.1**Pressing maize oil**

Oil products, which are obtained by extruding corn embryos by mechanical pressure.

3.3.2**Solvent extraction maize oil**

Oil products, which are refined and processed from crude maize oil, as prepared from corn germ or pre-pressed cake, by utilizing the properties of solvent to dissolve oils and fats.

3.4**Sterol**

The general term for hydroxyl-containing cyclopentane perhydrophenanthrene compounds, which exist in living organisms, in a free state OR in a state of being combined with fatty acids to form esters.

Note: Refer to GB/T 1535 for terms and definitions of items in quality requirements.

4 Categories

Maize oil is divided into two categories: Crude maize oil and finished product of maize oil.

5 Basic composition and main physical parameters

The basic composition and main physical parameters of maize oil are as shown in Table 1. See Appendix A for the total amount and composition of sterols, in crude maize oil. These compositions and parameters represent the basic properties of maize oil. They are for reference only, when used for authenticity determination.

- 7.5** Inspection of insoluble impurities: It is performed according to GB/T 15688.
- 7.6** Acid value inspection: It is performed according to GB 5009.229.
- 7.7** Heating test: It is performed according to GB/T 5531.
- 7.8** Inspection of soap content: It is performed according to GB/T 5533.
- 7.9** Freezing test: It is performed according to Appendix A of GB/T 17756-1999.
- 7.10** Fatty acid composition inspection: It is performed according to GB 5009.168.
- 7.11** Smoking point inspection: It is performed according to GB/T 20795.
- 7.12** Inspection of the composition of sterols and the total amount of sterols: It is performed according to GB/T 25223.

8 Inspection rules

8.1 Sampling

The maize oil's sampling method is implemented, in accordance with the requirements of GB/T 5524.

8.2 Exit-factory inspection

8.2.1 Inspection shall be carried out batch by batch; an inspection report shall be issued.

8.2.2 Inspection is according to the provisions of Table 2 or Table 3 of this standard.

8.3 Type inspection

8.3.1 When there are major changes in raw materials, equipment, processes OR the supervision and management department puts forward requirements, type inspection shall be carried out.

8.3.2 Inspection is performed according to the provisions of Table 1, Table 2 or Table 3. When the testing results do not conform to the provisions in Table 1, the corn germ raw materials, which are used to produce the batch of products, can be tested for evidence.

8.4 Judgment rules

8.4.1 When the product is not marked with a quality grade, it shall be judged as unqualified.

8.4.2 When the product is inspected and one item does not meet the specified value in Table 2 or Table 3, it is judged as a product that does not meet the requirements of this

grade.

9 Labels

9.1 It shall meet the requirements of GB 7718 and GB 28050.

9.2 The processing technology (such as pressing maize oil or leaching maize oil) and classification name shall be marked, on the packaging or accompanying documents.

9.3 The country of origin of the product shall be identified.

9.4 The maize oil, which is produced by genetically modified raw materials, shall be marked, according to the relevant national requirements.

10 Packaging, storage, transportation, sale

10.1 Packaging

It shall comply with GB/T 17374 and relevant national requirements.

10.2 Storage

It shall be stored in a hygienic, cool, dry, dark place. It shall not be stored together with harmful or toxic items, especially items with abnormal odors.

If the expiration date of the product depends on certain special conditions, it shall be stated on the label.

10.3 Transportation

Pay attention to safety during transportation, to prevent exposure to sunlight, rain, leakage, pollution, label shedding. For bulk transportation, special tankers shall be used, to keep the vehicle and the inside and outside of the tank clean and hygienic. Do not use vehicles, which have transported toxic and hazardous substances.

10.4 Sales

Prepackaged finished product of maize oil shall not be sold in bulk, from its original packaging at retail terminals.

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