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# The National Standard of the People's Republic of China

GB/T 19630.2—2011

Replacing GB/T 19630.2—2005

## Organic Products      Part 2: Processing

Organic Products——Part 2: Processing

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## Foreword

The GB/T 19630 Organic Products is composed of four parts, which are:

- Part 1: Production
- Part 2: Processing
- Part 3: Labeling and Marketing
- Part 4: Management System

This is Part 2 of GB/T 19630.

This Part is drafted in accordance with the rules provided in the Directives for Standardization - Part I: Structure and Drafting of Standards (GB/T 1.1-2009).

This Part is to replace Organic Products - Part 2: Processing (GB/T 19630.2-2005). As compared to GB/T 19630.2-2005, the main amendments are as follows:

- Adjustment made to the section of “Scope” by: making it clearer that the products covered in this Part shall include animal feeds, and deleting the restriction on organic textiles to the products from cotton or silk fiber materials;
- Addition of GB 2721-Hygienic Standard for Food Grade Salt and GB/T 16764-Hygienic Standard for Formula Feed Enterprises in the section of “Normative References”;
- Addition of feed additive (see clause 3.3) in the section of “Terms and Definitions”, as well as deletion of ionizing radiation (see clause 3.4 in 2005 Version) from the same section;
- Clause 4.1 and 4.2 in 2005 version were revised to clause 4.1 (General Principles) in the current version, and certain contents were supplemented or made clearer as follows: 1) more definite works will be done to ensure “organic nature” of products in each of the following 3 links: selection of ingredients, processing, and prevention from mixture with inorganic products; 2) an organic processing plant shall comply with the requirements provided in GB/T 16764; and 3) no negative impact, or merely minimum negative impact, can be caused to the environment.
- Addition of the requirements for feed processing in the section of “Ingredients, Additives and Processing Aids” (see clause 4.2.1.6);
- The provisions for parallel production was simplified in the section of “Processing” (see clause 4.2.2.2), and certain specific processing requirements (e.g. purge processing) (see clause 4.4.4.15 in 2005 Version) were deleted from the same section;
- Addition of the provisions for application of disinfectants in the section of “Prevention and Control of Pests” (see clause 4.2.3.3);
- Have the requirements for records in the course of storage and transportation included in GB/T 19630.4 (see clause 4.7.5 and 4.8.4 in GB/T 19630.4-XXXX 4.2.6 1, 2005);
- Amendment was made to the section of “Textile Processing” regarding the provisions for the time of making and enforcing an environment improvement plan (see clause 4.10.2 g in 2005 Version), and the provisions of “on processing plant hygiene”, “on pest control”, “on storage”, “on transportation”, “on packaging” and “on ingredients, additives and processing aids” (see clause 4.10.2l in 2005 Version) were deleted from the same section;
- Rearrangement was made to the substances listed in Annex A-Food Additives, Processing Aids and Other Substances Allowed in Organic Food Processing, and consequently it was set forth separately for table A.1-List of Food Additives and table A.2-List of Processing Aids

(see Annex A) to this Part; and

- Addition of Annex B-Feed Additives Allowed in Organic Feed Processing to this Part (see Annex B);

Please note that some provisions in this Part may be involved certain patents.

The authority issuing this Part is not responsible for identifying any of such patents. This Part was proposed by the Certification and Accreditation Administration of the People's Republic of China.

This Part was drafted by: WIT Co., Ltd., Organic Food Development and Certification Center of China, China Agricultural University, China Organic Food Certification Center, China National Accreditation Service for Conformity Assessment, Shandong Environment Protection Bureau, and CNCA Registration Department.

The main drafters of this Part 2 are: Lu Zhenhui, Yuan Qing, Wang Hui, Wang Yungang, Liu Xiande, QiaoYuhui, MengFanqiao, Luan Xihua, Tai Congmei, Tan Hong, Chen Yunhua, Xu Na, Dai Jinping, and Wang Maohua.

The publication history of the standard to be replaced with this Part is as follows:

- GB/T 19630.2-2005

# Organic Products    Part 2: Processing

## 1    Scope

This Part of GB/T 19630 provides the general standards and requirements for the processing of organic products.

This Part shall apply to foods, animal feeds, textiles and other organic products (as well as the packaging, storage and transportation of these products) made from the raw materials produced in accordance with GB/T 19630.1.

## 2    Normative References

The following normative documents constitute an integral part of this Part. For a reference document with issue date, only the dated version of it shall apply to this Part. For a reference document without issue date, the latest version of it, including all the amendments thereof, shall apply to this Part.

GB 2721	Hygienic Standard for Food Grade Salt
GB 2760	Hygienic Standards for Food Additives in Use
GB 4287	Discharge Standard of Water Pollutants for Dyeing and Finishing of Textile Industry
GB 5749	Sanitary Standard for Drinking Water
GB 14881	General Hygienic Standard for Food Enterprises
GB/T 16764	Hygienic Standard for Formula Feed Enterprises
GB/T 18885	Technical Specifications of Ecological Textiles
GB/T 19630.1	Organic Products - Part 1: Production

## 3    Terms and Definitions

The terms used in this Part shall be defined as follows:

### 3.1

#### **Ingredients**

The substances, including food additives, that may be used in the manufacturing or processing of, and still exist (including in the form of any modified nature) in, a product.

### 3.2

#### **Food additives**

The synthetic or natural substances that are added in a food in order to improve the food's color, fragrance, taste, shape and/or nutrition, or as necessary for preservation or processing of the food.

### 3.3

#### **Feed additives**

The substances that are added in small amount in animal feeds in the course of processing, manufacturing and usage of the feeds, including nutritional feed additives and general feed additives.

### 3.4

#### **Processing aids**

The substances or other materials (excluding any equipment or utensil) which by itself are used not as the ingredients of a product, but are used in the course of the processing, formulating or handling of the product merely for achieving a processing goal.

## **4 Requirements**

### **4.1 General Principles**

**4.1.1** In order to keep the organic nature of a product after being processed, the processing under this Part, as well as all the procedures thereafter, shall be effectively controlled as follows:

- a) Unless otherwise required by applicable law, the ingredients of the product shall be obtained mainly from the organic agricultural system prescribed in GB/T 19630.1, and the amount of inorganic ingredients, if any, used in the product must be reduced as far as possible;
- b) The nutritional ingredients and original nature of the product shall be retained in the course of processing as far as possible; and
- c) The processing and subsequent procedures of organic products shall be separated from that of inorganic products in terms of time and space.

**4.1.2** The processing of organic products shall comply with the requirements provided in the applicable laws and regulations. The plants for organic food processing shall comply with the requirements provided in GB 14881. The plants for organic feed processing shall comply with the requirements provided in GB/T 16764. Other organic product processing plants shall comply with their respective national and industrial regulations.

**4.1.3** The processing of organic products shall cause no negative impact, or merely minimum negative impact, on the environment.

### **4.2 Foods and Feeds**

#### **4.2.1 Ingredients, additives and processing aids**

4.2.1.1 A final product shall consist of at least 95%, in terms of mass or volume, of the organic ingredients coming from the organic agricultural system prescribed in GB/T 19630.1.

4.2.1.2 Inorganic agricultural ingredients may be used in a product when organic ingredients are unable to meet demand. However, the amount of inorganic ingredients in this case may not be more than 5% of the total ingredients in the product. The inorganic ingredients shall be substituted with organic ingredients when it is possible to obtain such organic ingredients in any way.

4.2.1.3 It is not allowed for an ingredient to include organic elements, conventional elements and converted elements at the same time.

4.2.1.4 The water and table salt used as ingredients shall comply with the requirements provided in GB 5749 and GB 2721, and may not be counted in the ingredients as required in clause 4.2.1.1.

4.2.1.5 It is allowed for the processing of an organic food to use the food additives and processing aids set forth in table A.1 and A.2 of Annex A in accordance with GB 2760.

4.2.1.6 It is allowed for the processing of an organic feed to use the feed additives and processing aids set forth in Annex B in accordance with the applicable laws and regulations.

4.2.1.7 Other substances used in a product shall firstly meet the requirements provided in GB 2760 and be assessed in accordance with the procedures provided in Annex C.

4.2.1.8 It is allowed to use mineral substances (including microelements), vitamins and amino acids as ingredients in a product when:

- a) it is unable to obtain a substitute substance meeting the requirements provided in this Standard;
- b) the product is unable to be manufactured or preserved in normal conditions or cannot meet certain quality criteria if without these ingredients; or
- c) otherwise required by the applicable laws and regulations.

4.2.1.9 It is not allowed to use any ingredients, additives or processing aids obtained from GMO substances.

#### **4.2.2 Processing**

4.2.2.1 It is allowed to use mechanical, freezing, heating, microwaving or smoking methods or the technology of microbial fermentation in the course of processing a kind of food or feed without destroying the main

nutritional ingredients in the food or feed. It is allowed to use the technology of extraction, concentration, sedimentation and filtration in the course of processing a kind of food or feed without adding any other kind of chemical reagent in the course of extraction or concentration, and the solvent used for extraction is limited to water, ethanol, animal/plant oil, vinegar, carbon dioxide, nitrogen or carboxylic acid only.

4.2.2.2 Certain necessary measures shall be adopted in order to prevent from the mixture of organic products and inorganic products or to avoid the pollution of an organic product by any banned substance.

4.2.2.3 The water used for processing shall comply with the requirements provided in GB 5749.

4.2.2.4 Irradiation is not allowed in the course of processing or storage.

4.2.2.5 It is not allowed to use asbestos or any other kind of material that may be polluted by a hazardous substance for filtration.

### **4.2.3 Prevention and Control of Pests**

4.2.3.1 In order to prevent from pests, following measures shall be taken at the first step:

- a) eliminate the conditions for breeding pests;
- b) prevent pests from access to the equipment for organic processing or handling; and
- c) prevent pest breeding through control of temperature, humidity, illumination, air and other environmental factors .

4.2.3.2 It is allowed to use machinery, pheromonal, odorous or viscous tools, physical barriers, diatomite or acousto-optic appliances for prevention and control of pests.

4.2.3.3 It is allowed to use ethanol, calcium hypochlorite, sodium hypochlorite, chlorine dioxide and hydrogen peroxide as a disinfectant in the course of an organic processing. The disinfectant shall be approved before being used in the course of an organic processing. It is not allowed to use any disinfectant that may have any poisonous or harmful residue.

4.2.3.4 It is encouraged to spray Chinese herbs, or fumigate with Chinese herbs, but not with sulfur, to handle the serious pest invasion in the premises for processing or storing organic products.

### **4.2.4 Packaging**

4.2.4.1 It is encouraged to use the packaging materials made of wood, bamboo, plant stems or leaves or paper, although it is allowed to use other kind of packaging materials that meet applicable hygienic requirements.

4.2.4.2 The materials used for packaging shall all be of food-grade packaging materials. A package shall be simple and practical and take into consideration of the biodegradation and recycling of the packaging materials. Excessive packaging shall be avoided.

4.2.4.3 It is allowed to use carbon and nitrogen as packing fillers.

4.2.4.4 It is not allowed to use any packaging material that contains synthetic fungicide, preservative or fumigant agent.

4.2.4.5 It is not allowed to contain any organic product with a bag or vessel that has been accessed by a banned substance.

### **4.2.5 Storage**

4.2.5.1 It is not allowed for an organic product to be polluted by any other substance in the course of storage.

4.2.5.2 The warehouse for storing an organic product shall be clean, pest-free and without any harmful residue.

4.2.5.3 Besides the method of normal temperature storage, following methods may be used for storage of organic products:

- a) air conditioning in the storage rooms;
- b) temperature control;
- c) drying; and
- d) moisture control.

4.2.5.4 An organic product shall be stored separately. If an organic product has to be stored in a warehouse

together with any other conventional product, a special area shall be allotted to the organic product and certain necessary measures shall be taken to ensure that the organic product will not be mixed with other products.

#### **4.2.6 Transportation**

4.2.6.1 The vehicle or any other appliance used for transportation of an organic product shall be cleansed before loading the product.

4.2.6.2 It shall be avoided in the course of transportation for an organic product to be mixed with a conventional product or polluted by other substances.

4.2.6.3 The organic certification label and the description thereabout on the outer package of an organic product may not be stained or damaged in the course of transportation.

### **4.3 Textiles**

#### **4.3.1 Raw material**

4.3.1.1 The textiles shall be made from fibrous materials being of 100% organic nature.

4.3.1.2 It shall cause as little as possible negative impact on the environment in the course of processing raw materials into fibers.

4.3.1.3 As for the non-textile raw materials used in a textile product, no harmful impact may be caused on the environment or human being in the course of manufacturing, use and rejects handling of such non-textile raw materials.

#### **4.3.2 Processing**

4.3.2.1 Suitable working methods shall be used for processing of textiles so that the environment will be affected as little as possible.

4.3.2.2 No substance harmful to the environment or human body may be used. The processing aids used for a textile product may not contain any substance that is carcinogenic, teratogenic, mutagenic or allergenic. The LD<sub>50</sub> for the poisonous oral solution used for mammals shall be greater than 2000mg/kg.

4.3.2.3 No substance prone to bioaccumulation or non-biodegradable may be used.

4.3.2.4 The energy consumed in the course of textile processing shall be at the minimum level, and renewable resources shall be used for the processing as far as possible.

4.3.2.5 If the separation of an organic processing from a conventional processing in terms of equipment or technology will cause an obvious negative impact on the environment, while there is no risk for the organic product to be accessed by the circulating fluid used in the conventional processing (alkali wash, starching, rinsing etc.) if without such separation, it may be allowed to be not separated between the organic processing and conventional processing; provided, however, that the processing plant shall ensure the organic textile product be not polluted by any banned substance.

4.3.2.6 An processing entity shall use an effective technology in wastewater treatment so that the pollutant concentration in the wastewater will not surpass the level provided in GB 4287.

4.3.2.7 An processing entity shall make and implement a plan for environment control and improvement in the course of manufacturing process.

4.3.2.8 The surfactants used in the course of cocoon cooking or wool washing shall be those readily biodegradable.

4.3.2.9 The slurry used for processing shall be degradable, or may be recycled at 80% in the minimum.

4.3.2.10 Sodium hydroxide or other alkaline materials may be allowed for mercerizing, but shall be recycled as far as possible.

4.3.2.11 The oil selected for spinning, weaving or knitting (i.e. used for needles) shall be those readily biodegradable, or extracted from plants.

#### **4.3.3 Dyestuff; dyeing and finishing**

4.3.3.1 Shall use the dyes derived from plants or minerals.

4.3.3.2 Harmful dyes and substances forbidden in GB/T 18885 must not be used.

4.3.3.3 Natural thickening agents for printing and dyeing may be used.

4.3.3.4 Biological degradable softening agents may be used.

4.3.3.5 Substances that can produce organic halogen compounds in wastewater must not be used in cleaning up printing or dyeing equipment.

4.3.3.6 Heavy metal content in dyestuff must not exceed the tolerance level set forth in Table 1 below.

**Table 1 Tolerance Levels of Heavy Metal Contents in Dyestuff (the original source of the reference figures for the tolerances shall be given in the preparation instruction)**

Name of metal	Tolerance level/(mg/kg)	Name of metal	Tolerance level/(mg/kg)	Name of metal	Tolerance level/(mg/kg)
Sb	50	As	50	Ba	100
Pb	100	Cd	20	Cr	100
Fe	2500	Cu	250	Mn	1000
Ni	200	Hg	4	Se	20
Ag	100	Zn	1500	Sn	250

#### 4.3.4 Finished products

4.3.4.1 Auxiliaries (lining, ornament, button, zipper, suture, etc.) shall be made of materials harmless to the environment, and natural materials are encouraged to be used as far as possible.

4.3.4.2 Processing aids detrimental to the environment or human being may not be used in the processing (e.g. sand washing and water washing) of finished products.

4.3.4.3 The content of harmful substances in a finished product may not exceed the tolerance level provided in GB/T 18885.

**Annex A**  
**(Normative)**

**Food Additives, Processing Aids and Other Substances Allowed in Organic Food Processing**

**A.1 Food additives**

**Table A.1 List of Food Additives**

No.	Name	Conditions of Use	INS
1	Arabic gum	Thickening agent. Applied to the foods other than those set forth in Table A.3 of GB 2760-2011 in appropriate amount of use necessary for production demand.	414
2	Karaya gum	Stabilizing agent. Applied to milk, water-in-oil fat emulsions and those foods other than those set forth in Table A.3 of GB 2760-2011 in appropriate amount of use necessary for production demand.	416
3	Silicon dioxide	Anticaking agent. Applied to dehydrated egg products, milk powder, cocoa powder, cocoa butter, powdered sugar, solid compound seasoning, solid drink and spices in the limited amount of use as provided in GB 2760-2011.	551
4	Sulfur dioxide	Bleaching agent/preservative/antioxidant. Applied to unsweetened wine in the maximum amount of 50 mg/L. Applied to sweetened wine in the maximum amount of 100mg/L. Applied to red wine in the maximum amount of 100mg/L. Applied to white wine and rosé wine in the maximum amount of 150mg/L. The maximum amount of use is calculated at the residue of sulfur dioxide.	220
5	Glycerine	Water retention agent/emulsifying agent. Applied to the foods other than those set forth in Table A.3 of GB 2760-2011 in appropriate amount of use necessary for production demand.	422
6	Guar gum	Thickening agent. Applied to the foods other than those set forth in Table A.3 of GB 2760-2011 in appropriate amount of use necessary for production demand. Applied to watery cream or the formula foods for older infants and young children in the limited amount of use as provided in GB 2760-2011.	412
7	Pectins	Emulsifying agent/stabilizing agent/thickening agent. Applied to fermented milk, watery cream, butter and concentrated butter, raw wet flour products (noodles, dumpling wrappers, wonton wrappers, Shumai wrappers, etc.), raw dry flour products, sugar and syrup (brown sugar, red sugar, maple syrup, etc.), spices and the foods other than those set forth in Table A.3 of GB 2760-2011 in appropriate amount of use necessary for production demand. Applied to fruit and vegetable juice (syrup) in the limited amount of use as provided in GB2760-2011.	440
8	Potassium alginate	Thickening agent. Applied to the foods other than those set forth in Table A.3 of GB2760-2011 in appropriate amount of use necessary for production demand.	402
9	Sodium alginate	Thickening agent. Applied to fermented milk, watery cream, butter and concentrated butter, raw wet flour products (noodles, dumpling wrappers, wonton wrappers, Shumai wrappers, etc.), raw dry flour products, fruit and vegetable juice (syrup), spices and the foods other than those set forth in Table A.3 of GB 2760-2011 in appropriate amount of use necessary for production demand. Applied to sugar and syrup (brown sugar, red sugar, maple syrup, etc.) in the limited amount of use as provided in GB 2760-2011.	401

No.	Name	Conditions of Use	INS
10	Carob bean gum	Thickening agent. Applied to the foods other than those set forth in Table A.3 of GB 2760-2011 in appropriate amount of use necessary for production demand. Applied to the formula foods for infants and young children in the limited amount of use as provided in GB 2760-2011.	410
11	Xanthan gum	Thickening agent. Applied to the foods other than those set forth in Table A.3 of GB 2760-2011 in appropriate amount of use necessary for production demand. Stabilizing agent/thickening agent, applied to watery cream, fruit and vegetable juice (syrup) and spices in appropriate amount of use necessary for production demand, applied to butter and concentrated butter, raw wet flour products (noodles, dumpling wrappers, wonton wrappers, Shumai wrappers, etc.), raw dry flour products, sugar and syrup (brown sugar, red sugar, maple syrup, etc.) in the limited amount of use as provided in GB2760-2011.	415
12	Potassium metabisulphite	Bleaching agent/preservative/antioxidant. Applied to beer in the limited amount of use as provided in GB2760-2011. Applied to unsweetened wine in the maximum amount of 50mg/L. Applied to sweetened wine in the maximum amount of 100mg/L. Applied to red wine in the maximum amount of 100mg/L. Applied to white wine and rosé wine in the maximum amount of 150mg/L. The maximum amount of use is calculated at the residue of sulfur dioxide.	224
13	L(+)-Tartaric acid, Tartaric acid	Acidity regulator. Applied to the foods other than those set forth in Table A.3 of GB 2760-2011 in appropriate amount of use necessary for production demand.	334
14	Potassium bitartrate	Leavening agent. Applied to wheat flour, wheat flour products and bakery products in appropriate amount of use necessary for production demand.	336
15	Carrageenan	Thickening agent. Applied to the foods other than those set forth in Table A.3 of GB 2760-2011 in appropriate amount of use necessary for production demand. Emulsifying agent/stabilizing agent/thickening agent. Applied to watery cream, butter and concentrated butter, raw wet flour products (noodles, dumpling wrappers, wonton wrappers, Shumai wrappers, etc.), fruit and vegetable juice (syrup) and spices in appropriate amount of use necessary for production demand. Applied to raw dry flour products, sugar and syrup (brown sugar, red sugar, maple syrup, etc.) and the formula foods for infants and young children in the limited amount of use as provided in GB 2760-2011.	407
16	Vitamin C (ascorbic acid)	Antioxidant. Applied to concentrated fruit and vegetable juice (syrup) and the foods other than those set forth in Table A.3 of GB 2760-2011 in appropriate amount of use necessary for production demand. Flour treatment agent. Applied to wheat in the limited amount of use as provided in GB2760-2011.	300
17	Calcium hydrogen phosphate	Leavening agent. Applied to wheat flour, wheat flour products, raw wet flour products (noodles, dumpling wrappers, wonton wrappers, Shumai wrappers, etc.), bakery foods and puffed foods within the scope and in the limited amount of use as provided in GB 2760-2011.	341ii
18	Calcium sulfate (natural)	Stabilizing agent/coagulating agent/thickening agent/acidity regulator. Applied to bean products in appropriate amount of use necessary for production demand. Applied to breads, cakes, biscuits, cured meat products (bacon, preserved ham, Pressed salted duck, Chinese ham, Lap Cheong, etc.) (Lap Cheong only) and sausages in the limited amount of use as provided in GB 2760-2011.	516

No.	Name	Conditions of Use	INS
19	Calcium chloride	Coagulating agent/stabilizing agent/thickening agent. Applied to watery cream and bean products in appropriate amount of use necessary for production demand. Applied to canned fruits, jams, canned vegetables, decorative candy, decorative crest and sweet juice, flavored syrup and other drinking water in the limited amount of use as provided in GB 2760-2011.	509
20	Potassium chloride	Applied to salt and salt substitutes in the limited amount of use as provided in GB 2760-2011.	508
21	Magnesium chloride (natural)	Stabilizing agent and coagulating agent. Applied to bean products in appropriate amount of use necessary for production demand.	511
22	Gelatin	Thickening agent. Applied to the foods other than those set forth in Table A.3 of GB 2760-2011 in appropriate amount of use necessary for production demand.	
23	Citric acid	Acidity regulator, which shall be made from carbohydrate through microbial fermentation. Applied to the formula foods for infants and young children, the complementary food for infants and young children and the foods other than those set forth in Table A.3 of GB 2760-2011 in appropriate amount of use necessary for production demand.	330
24	Tripotassium citrate	Acidity regulator. Applied to the formula foods for infants and young children, the complementary food for infants and young children and the foods other than those set forth in Table A.3 of GB 2760-2011 in appropriate amount of use necessary for production demand.	332ii
25	Trisodium citrate	Acidity regulator. Applied to the formula foods for infants and young children, the complementary food for infants and young children and the foods other than those set forth in Table A.3 of GB 2760-2011 in appropriate amount of use necessary for production demand.	331iii
26	Malic acid,	which may not be obtained from GMO. and the foods other than those set forth in Table A.3 of GB 2760-2011 in appropriate amount of use necessary for production demand.	296
27	Calcium hydroxide	Acidity regulator. Applied to milk powder (including sweetened milk powder), cream powder (including the products made from cream power) and the formula foods for infants in appropriate amount of use necessary for production demand.	526
28	Agar	Thickening agent. Applied to the foods other than those set forth in Table A.3 of GB 2760-2011 in appropriate amount of use necessary for production demand.	406
29	Lactic acid	Acidity regulator, which may not be obtained from GMO. Applied to the formula foods for infants and young children and the foods other than those set forth in Table A.3 of GB 2760-2011 in appropriate amount of use necessary for production demand.	270
30	Sodium lactate	Water retention agent/acidity regulator/antioxidant/leavening agent/thickening agent/stabilizing agent. Applied to the foods other than those set forth in Table A.3 of GB 2760-2011 in appropriate amount of use necessary for production demand. Applied to raw wet flour products (noodles, dumpling wrappers, wonton wrappers, Shumai wrappers, etc.) in the limited amount of use as provided in GB 2760-2011.	325
31	Calcium carbonate.	Leavening agent/powder treatment agent. Applied to the foods other than those set forth in Table A.3 of GB 2760-2011 in appropriate amount of use necessary for production demand.	170i
32	Potassium carbonate	Acidity regulator. Applied to the formula foods for infants and young children and the foods other than those set forth in Table A.3 of GB 2760-2011 in appropriate amount of use necessary for production demand.	501i

No.	Name	Conditions of Use	INS
		Applied to flour foods (excluding raw wet flour products and raw dry flour products) in the limited amount of use as provided in GB 2760-2011.	
33	Sodium carbonate	Acidity regulator. Applied to raw wet flour products (noodles, dumpling wrappers, wonton wrappers, Shumai wrappers, etc.), raw dry flour products and the foods other than those set forth in Table A.3 of GB 2760-2011 in appropriate amount of use necessary for production demand.	500i
34	Ammonium hydrogen carbonate	Leavening agent. Applied to the foods other than those set forth in Table A.3 of GB 2760-2011 in appropriate amount of use necessary for production demand.	503ii
35	Potassium nitrate	Color retention agent/preservative agent. Applied to meat products in the maximum amount of 80mg/kg, with the maximum residue of 30mg/kg (calculated on sodium nitrite).	252
36	Sodium nitrite	Color retention agent/preservative agent. Applied to meat products in the maximum amount of 80mg/kg, with the maximum residue of 30mg/kg (calculated on sodium nitrite).	250
37	Annatto extract(bixin, norbixin)	Coloring agent. Applied to processed cheese, grease or grease products (creamer only), frozen drinks (excluding edible ices), fruit sauces, chocolate and chocolate products, cocoa products (except for 05.01.01), CBR and similar CBR products, candies, flour paste (e.g. the dragging paste used for fish or poultry meat), coating flour and frying flour in the limited amount of use as provided in GB 2760-2011.	160b

## A.2 Processing aids

Table A.2 List of Processing Aids

No.	Name in Chinese	Name in English	INS
1	氮气	Nitrogen. Used for food preservation. Only non-petroleum source being free of petroleum-free nitrogen is allowed.	941
2	二氧化碳（非石油制品） Carbon dioxide (non-petroleum product).	Non-petroleum product, used as preservative or processing aid for carbonated drinks and other fermented liquors (aerated).	290
3	高岭土	Kaolin. Clarifying or filtrating aid, used for processing and fermentation in making grape wine, fruit wine, and mixed liquor.	559
4	固化单宁 Immobilized tannin.	Clarifying agent, used for processing and fermenting of mixed liquor.	
5	硅胶	Silica gel. Clarifying agent, used for processing of beer, grape wine, fruit wine, mixed liquor and millet wine.	
6	硅藻土	Diatomaceous earth. Used as filtrating aid.	
7	活性炭	Processing aids	
8	硫酸	Sulfuric acid. Flocculating agent, used for beer processing.	
9	氯化钙	Calcium chloride. Processing aid, used for processing of bean products.	509
10	膨润土（皂土、斑脱土） Bentonite.	Adsorbing agent/filter aid/clarifying agent, used for processing and fermentation in making grape wine, fruit wine, millet wine and mixed liquor.	

No.	Name in Chinese	Name in English	INS
11	氢氧化钙	Calcium hydroxide. Used as additive for corn flour; used as sugar processing aid.	526
12	氢氧化钠	Sodium hydroxide. Acidity regulator used as processing aid.	524
13	食用单宁	Edible tannin. Used for processing of millet wine, beer, grape wine and mixed liquor; used for grease decolorization.	181
14	碳酸钙	Processing aids	170i
15	Potassium carbonate	Potassium carbonate. Used for grape drying.	501i
16	碳酸镁	Magnesium carbonate. Processing aid, used for flour milling.	504i
17	碳酸钠	Sodium carbonate, used for production of sugar.	500i
18	纤维素	Cellulose. Used for production of gelatin.	
19	盐酸	Cellulose. Used for production of gelatin.	507
20	乙醇	Ethanol. Organic source is necessary for the ethanol used as raw material.	
21	珍珠岩	Pearl rock. Filter aid, used for processing and fermentation in making beer, grape wine, fruit wine and mixed liquor.	
22	滑石粉	Talc powder. Releasing agent, used for candy processing.	553iii

### A.3 Condiments & Seasonings

- a) Essential oil, i.e. the natural perfume extracted through mechanical and physical methods with oil, water, alcohol or carbon dioxide as solvent;
- b) Condiments and seasonings in natural smoky flavor;
- c) Natural condiments and seasonings, which must be assessed and approved in accordance with the standards that are provided in Annex C for assessment of additives and processing aids.

### A.4 Microbial Products

- a) Microbial natural products, except for GMO and GMO products;
- b) Starter culture, which is free of bleaching agent and organic solvent in the course of its manufacturing process.

### A.5 Other Ingredients

- a) Drinking water;
- b) Table salt;
- c) Mineral substance (including microelement) and vitamin, allowed when required by law, or when it is proved to be in serious deficiency in a food.

**Annex B**  
**(Normative)**

**Feed Additives Allowed in Organic Feed Processing**

**Table B.1 List of Feed Additives**

No.	Name	Instruction	INS
1	Iron	Ferrous sulfate, ferrous carbonate.	
2	Iodine	Calcium iodate, six water calcium iodate, potassium iodide, sodium iodide.	
3	Cobalt	Cobalt sulfate, cobalt chloride.	
4	Copper	Pentahydrate copper sulphate, cupric oxide (applicable to cud chewers)	
5	Manganese	Carbonate manganese and manganese oxide, manganese sulfate, manganese chloride.	
6	Zinc	Zinc carbonate, zinc oxide, zinc sulfate.	
7	Molybdenum	Sodium molybdate	
8	Selenium	Sodium selenite	
9	Sodium	Sodium chloride, sodium sulfate.	
10	Calcium	Calcium carbonate (e.g. lime stone powder and shell powder), calcium lactate.	
11	Phosphorous	Calcium hydrogen phosphate, calcium dihydrogen phosphate, tricalcium phosphate.	
12	Magnesium	Magnesium oxide, magnesium chloride, magnesium sulfate.	
13	Sulfur	Sodium sulfate	
14	Vitamin	Must be obtained from the natural raw materials of feeds. Synthetic vitamin with same natural effect is allowed in feeding monogastric animals. If it is unable to obtain natural source vitamin for cud chewer feeding, synthetic vitamin A, D and C with same natural effects are allowed.	
15	Microorganism	Bacillus licheniformis, bacillus subtilis, discrepancy of bifidobacterium, dung enterococcus, excrement enterococcus, lactic acid bacteria, lactobacillus acidophilus, lactobacillus casei, lactobacillus lactic acid, plant lactobacillus, lactic acid bacteria, pediococcus pentosaceus, protein production candida yeast, saccharomyces cerevisiae, swamp Red Pseudomonas, bulgaria lactobacillus (only applicable to silages and the feeds for pigs and chickens).	
16	Enzyme	Silage additive	
17	Sorbic acid	Preservative	200
18	Formic acid	Preservative, applied to silage only when it is unable to have silage fully fermented under weather conditions.	236
19	Acetic acid	Preservative, applied to silage only when it is unable to have silage fully fermented under weather conditions.	260
20	Lactic acid	Preservative, applied to silage only when it is unable to have silage fully fermented under weather conditions.	270
21	Propionic acid	Preservative, applied to silage only when it is unable to have silage fully fermented under weather conditions.	280
22	Citric acid	Preservative	330
23	Calcium stearate	Obtained from natural sources, used for adhesive agent and anticaking agent.	470
24	Silicon dioxide	Used for adhesive agent and anticaking agent.	551b

## **Annex C**

### **(Informative)**

#### **Guidelines for Assessment of Additives and Aids Used in Organic Processing**

The allowed additives and processing aids set forth in Annex A and Annex B will not cover all the substances meeting the conditions for organic production. A substance uncovered in Annex A or Annex B shall be assessed in accordance with the following guidelines before determining whether it is the one that may be used in organic processing.

#### **C.1 Principles**

An additive or processing aid may be used in organic processing only when it is necessary and, if the use is a must, following principles shall be observed:

- a) retain the organic nature of the product; and
- b) the product is unable to be produced or preserved if without such additive or processing aid.

#### **C.2 Conditions for Approval of Food/Feed Additive and Processing Aid**

Following conditions shall be met for an additive or processing aid before being approved in producing an organic product:

- a) no other acceptable technology is available for processing or preservation of the product;
- b) the use of the additive or processing aid will be as far as possible reduce the physical or mechanical damage that may be caused by other technological options.
- c) an alternative method (e.g. cut down on transport time or improve storage facilities) will not effectively maintain the product in health conditions;
- d) natural source substances are insufficient to substitute for the additive or processing aid in terms of either quality or quantity;
- e) the additive or processing aid will not be harmful to the organic integrity of the product;
- f) the use of the additive or processing aid, including, but not limited to pigments and spices, will not get the customers confused with the impression of that the quality of the product seems to be better than its raw materials.
- g) the use of the additive or processing aid will not be harmful to the overall quality of the product.

#### **C.3 Order of Precedence for Use of Food/Feed Additives and Processing Aids**

**C.3.1 The following options, if available, shall be given in priority to the use of any additive or processing aid:**

- a) the crop being produced in accordance with organic certification requirements, including the products (e.g. the flour used as thickening agent and the plant oil used as releasing agent) made there from that are free of any additive;
- b) the foods or raw materials that are obtained from plant or animal sources merely through a simple mechanical or physical method, e.g. salting;

**C.3.2 The second option:**

- a) the pure food ingredients, e.g. starch, tartrate and pectin, that are made by means of enzyme or through physical method;
- b) the substances and microorganisms, e.g. acerola, fruit juice, starter culture and other enzymes and microorganisms, that are made from the materials being not of an agricultural source.

**C.3.3 None of the following additives and processing aids may be used in an organic product:**

- a) the substance having the same nature with that of a natural substance;

- b) the synthetic substance, e.g. cross-linked and acetylated starches, that is basically “new structure of ingredients” or of non-natural source;
- c) GMO additives or processing aids;
- d) synthetic pigments and synthetic preservatives.

The carriers and preservatives used in this case for making an additive or processing aid shall also be taken into account.

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