



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB 2715-2016

Replacing GB 2715-2005

**Hygienic standard for grains
(English Translation)**

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Foreword

This standard replaces GB 2715-2005 "food hygiene standards." this standard compared with GB 2715-2005, the main changes are as follows.

- Standard name was changed to "national food safety standards for food";
- Modify the terms and definitions;
- Modify the sensory requirements;
- Modify the poisonous fungi, plant seeds indicators;
- Modify the physical and chemical properties;
- Modify the storage and transport requirements;
- Revised appendix.

National Food Safety Standard food

1 Scope

This standard applies to raw grain for human consumption, and grain products, including cereals, beans, potatoes and so on.

This standard does not apply to the processing of edible oil raw materials.

2.1 Unprocessed

Collectively without grains, beans, potatoes, etc. processing.

2.2 Grain products

Raw grain, etc. by mechanical processing of primary products, such as rice, wheat powder.

2.3 Heat damaged kernels

Or other reasons due to microbial heat production and heat to change the normal color or grain by injury.

2.4 Ergot

Ergot [*Clavicepspurpurea* (Fr.) Tul.] In rye, wheat, barley, oats and other grasses ovary formed parasitic Sclerotia.

2.5 Darnel

Mixed together often, and wheat, and its shape is similar to wheat, wheat grain containing toxic base *Lolium* grassy herb.

2.6 Moldy grain

Grain mildew and obviously hurt the embryo or endosperm or cotyledons, no edible particles value.

3.1 Sensory requirements

Sensory requirements shall comply with the requirements of Table 1.

Table 1 Sensory requirements

Project requires test methods Color and odor with normal food color, smell GB/T 5492
Heat-damaged kernels /% Wheat ≤ 0.5 According to GB/T 5494 in imperfect grain inspection rules, Sort out the heat damaged kernels, were weighed to calculate the content
Moldy grain /% Soybean $\leq$ Other food except soybeans outside ≤ 1.0 2.0 According to GB/T 5494 in imperfect grain inspection rules, Pick out the moldy grain, were weighed to calculate the content

3.2 Physical and Chemical Indicators

Physical and chemical indicators should be consistent with the provisions of Table 2.

Table 2. Physical and chemical indicators

Item	Index	Test Method	the total hydrocyanic acid/(mg/kg)	Tapioca	<= 10	GB 5009.36
Tannins (dry basis)	/%	Sorghum, rice, sorghum flour	<= 0.3	GB/T 15686		

3.3 Poisonous fungi, plant seeds Limited

Poisonous fungi, plant seeds shall be limited in accordance with Table 3.

Table 3 poisonous fungi, plant seeds Limited

Project	Limited test methods	Ergot /%	Rice, corn, beans	Wheat, oats, naked oats, barley, rice barley	<= not Detected	0.01	Appendix A	Darnel/(tablets/kg)	Wheat, barley	<= 1	SN/T 1154	Datura (Daturasp.)	Seeds and other poisonous plants	a/(tablets/kg)	Corn, sorghum, rice, beans, wheat, oats, naked oats, barley, rice barley	<= 1	Appendix B	a	Crotalaria (Crotalariaspp.), wheat Seno (AgrostemmagithagoL.), castor bean (RicinuscommunisL.) and other recognized for Harmful to the health of the seeds.

3.4 Limits of contaminants and mycotoxins Limited

3.4.1

Limits of contaminants should comply with GB 2762, wherein the unprocessed food category shall conform to GB 2762 in cereals, beans, potatoes the provisions of refined grain food category shall conform to the provisions of the GB 2762 mill processed grain, beans, dried potato's.

3.4.2

Limits of Mycotoxins should comply with GB 2761, wherein the unprocessed food category shall conform to GB 2761 in cereals, beans, potato Prescribed class, refined grain food category shall conform to the provisions of the GB 2761 mill processed grain, beans, dried potato's.

3.5 MRL

Pesticide residues shall comply with the provisions of GB 2763.

3.6 Food additives and food nutrition fortifier

3.6.1

Use of food additives should comply with the provisions of GB 2760.

3.6.2

food nutrition enhancers should comply with the provisions of GB 14880.

4 Other

Food should be designed storage, special transport. Should be stored in a clean, dry, rain, moisture, insects and rodents, odor-free warehouses, should not be hazardous Substance or substance containing a high moisture coexist, and the use of appropriate technical measures in different ecological regions grain storage, grain storage to ensure security and reduce loss Loss loss, to prevent contamination. Should meet the health requirements of the use of means of transport, the transport process should pay attention to prevent rain and contamination.

Appendix A

Ergot test methods

A.1 Identification

A.1.1 morphology

Ergot elongated strip or banana-shaped, sometimes slightly flat, long 3mm ~ 10mm, coarse 1mm ~ 7mm, black or purple outside, there Longitudinal grooves and transverse cracks, brittle, easily broken, section flat, blunt polygonal or oval, center white, gray or pink and white. Sclerotia germination after dormancy Hair will produce sub-mount; infertility child seat elongate shank, head flat spherical diameter of 1mm ~ 2mm, red-brown, the outer edge of raw perithecium.

A.1.2 tissue sections After soaking in water 24h remove ergot, ergot take an expanded fixed in potato or carrot in the middle with a scalpel cut into thin Slices with methylene blue solution (1g/L) staining, observed under a microscope, it organized, and healthy wheat as negative control.

A.2 ergot alkaloids ergot red pigment and qualitative A.2.1 Principle Using colorimetric red pigment and ergot alkaloids ergot inspection. Ergot red pigment was red, ergot in saturated sodium bicarbonate solution Base chloroform extract and post-dimethylaminobenzaldehyde contact bluish purple ring, after a few minutes chloroform layer was blue, and in 365nm UV lamp, the ethanol solution was blue fluorescence.

A.2.2 Reagents

A.2.2.1 tartaric acid solution (20g/L).

A.2.2.2 anhydrous ether.

A.2.2.3 saturated sodium bicarbonate solution.

A.2.2.4 ammonia (11).