

SN

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

SN/T 3323.3-2012

**Mill scale - Part 3: Determination of lead, chromium, cadmium -
Inductively coupled plasma atomic emission spectrometry**

氧化铁皮 第3部分：铅、铬、镉元素测定 电感耦合等离子体原子发射光谱法

(English Translation)

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1 Scope

This Standard specifies the terms and definitions, classification and inspection methods for sensory, physical and chemical quality inspection of imported soybeans.

This Standard applies to the quality inspection of imported soybeans.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies to this document. For undated references, the latest edition (including any amendment) applies to this document.

GB 5009.5, National food safety standard - Determination of protein in foods

GB/T 5498, Inspection of grain and oils - Determination of test weight

GB/T 14488.1, Oilseeds - Determination of oil content

GB/T 14489.1, Oilseeds - Determination of moisture and volatile matter content

SN/T 0799.1, Inspection of cereals, oils and feedstuffs for import and export - Part

1: General rules for the inspection

SN/T 2504, Technique procedures of quality inspection and quarantine for imported and exported cereals

3 Terms and definitions

The following terms and definitions are applicable to this document.

3.1 Soybeans; soybean

Kernels of the herbaceous leguminous plant used to cultivate soybean pods. The kernel is oval to nearly spherical, and the seed coat is yellow, green, black or of other colors.

3.2 Appearance, color, odor

The inherent appearance, overall color, luster and odor of soybeans.

3.3 Test weight

The mass of soybean kernels per unit volume.

3.4 Foreign matter; impurity; admixture

Substances other than soybeans, including sieved materials passing through a 3.0 mm circular screen and particles of the product itself that have no use value. It can be divided into coarse foreign matter and fine foreign matter.

3.4.1 Coarse foreign matter

The substances - visible to the naked eye - whose volume is obviously larger than that of soybeans, in 1000 g of samples, such as corn, cocklebur, bean pods, stems.

3.4.2 Fine foreign matter

Including all substances that can pass through a 3.0 mm circular screen in the 200 g of samples separated after removing coarse foreign matters, the non-soybean substances remaining on the screen, and the particles of this product that have no use value, excluding soybean seed coats.

3.5 Unsound kernels; imperfect kernels

Damaged but still valuable soybean kernels, including broken kernels, damaged kernels and immature kernels.

3.5.1 Broken kernels

Non-damaged kernels whose cotyledons are broken to 25% or more of the kernel volume.

3.5.2 Damaged kernels

Soybean kernels or groats that have been severely abrasively damaged, severely weathered, sick, frostbitten, bacterially damaged, heat damaged, worms-damaged, mold-damaged, bedbug-stabbed, or otherwise damaged, including weeviled kernels, spotted kernels, sprouted kernels, moldy kernels, heat-damaged kernels, damaged-by-

Heat kernels, frost-damaged kernels, and wafer-like-immatured kernels.

3.5.2.1 Weeviled kernels; insect damage kernels; injured kernels; stinkbug stung

Kernels

Whole or crushed soybeans that have been eaten by insects, forming holes or worm tracks in the cotyledons, including insect-stinging kernels that are eaten by piercing- sucking insects (such as stinkbugs) during growth, with puncture holes, and changed color around the wormhole, where damaged area is more than 25% of the actual area.

3.8 Crude fat

Substances in soybean samples that are soluble in ether (or petroleum ether).

3.9 Class

Commercial classification based on the seed coat color of soybean kernels.

3.9.1 Yellow soybean

Kernels - whose seed coats and cotyledons are yellow or light yellow - are not less than 95%.

3.9.2 Green soybean

Kernels - whose seed coats are green - are not less than 95%.

3.9.3 Black soybean

Kernels - whose seed coats are black - are not less than 95%.

3.9.4 Other soybean

Soybeans with green, black, brown or bi-colored seed coats. The cross-section of green-skinned soybeans shall also be green; bi-colored soybeans shall have two colors, one of which is brown or black, and more than 50% of the seed coat shall be brown or black.

3.9.5 Mixed soybean

Soybeans that do not meet the definitions of the above four classes.

4.1 General rules for inspection

Carry out according to the method specified in SN/T 0799.1.

4.2 Sampling and sample preparation

Sampling shall be carried out in accordance with the method specified in SN/T 2504, and the flow chart of sample preparation and mixing is shown in Appendix A.

4.3 Appearance, color, odor inspection

Carry out in accordance with the relevant provisions of SN/T 2504.

4.4 Test weight inspection

Carry out in accordance with the relevant provisions of GB/T 5498. The units indicated in the contract - such as grams/liter (g/L), kilograms/hectoliter (kg/hL), pounds/bushel (lbs./bu) - can be used according to the actual situation. When necessary, they can be converted according to the conversion relationship: $\text{lbs./bu} \times 1.287 = \text{kg/hL}$; $\text{g/L} \times 0.1$

= kg/hL.

4.5 Foreign matter, broken kernels, damaged kernels, heat-damaged kernels and

immature kernels content inspection

See Appendix B for inspection methods and procedures.

4.6 Moisture and volatile inspection

Carry out according to the method specified in GB/T 14489.1.

4.7 Crude protein content inspection

Carry out according to the method specified in GB 5009.5.

4.8 Crude fat content inspection

Carry out according to the method specified in GB/T 14488.1.

4.9 Other methods

The above-mentioned items can be measured by the instrument method that conforms to the prescribed procedures and has been verified to obtain the same result as the standard method. The operation methods of various instruments are carried out according to the instrument operation procedures.

5 Evaluation and handling of inspection results

Carry out in accordance with the relevant provisions of SN/T 2504.