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

SN/T 3323.2-2012

**Mill scale. Part 2: Determination of sulfur content. High
frequency combustion infrared absorption method**

氧化铁皮 第2部分：硫含量的测定高频燃烧红外线吸收法

(English Translation)

Issued on: May 26, 2015

Implemented on: January 1, 2016

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine of PRC**

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1 Scope

This standard specifies a colorimetric method, for the determination of crude polysaccharides in plant source foods for export.

This standard is applicable to the determination of crude polysaccharide content in edible fungi, wolfberry, grapes, dates, fruit juices and other plant source foods.

This standard does not apply to foods, to which starch and dextrin components are added.

The detection limit of this standard method is 0.5 mg/kg.

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/T 6682-2008 Water for analytical laboratory use - Specification and test methods

3 Terms and definitions

The following terms and definitions apply to this document.

3.1

Crude polysaccharides

A series of polymer compounds, which use beta-D-glucan or alpha-D-glucan or other carbon sugars, as the main chain. The general molecular formula is $(C_6H_{12}O_6)_n$.

7.1 Determination of the presence of starch and dextrin in the sample

Refer to Appendix A for judgment. If the sample contains starch and dextrin, this method is not applicable to the determination of polysaccharide content in this sample.

If the sample does not contain starch and dextrin, proceed to the next determination step.

7.2.1 Preserved fruit samples such as dried wolfberry, raisins, dried apricots

Place the solid sample to be tested, in a frozen state for drying and then pulverized.

After pulverization, the sample is passed through a 20 mm sieve AND mixed evenly.

7.2.2 Mushroom samples such as shiitake mushrooms, oyster mushrooms,

Ganoderma lucidum

Dry the sample to be tested. Pass it through a 20 mm sieve after crushing. Mix it evenly.

7.2.3 Fruit samples such as grapes and jujubes

Peel and de-nucleate the sample to be tested. Dry and pulverize it. Pass it through a 20 mm sieve. Mix it evenly.

7.3 Sample preservation

The samples are stored in -18 °C refrigerator. During sample preparation and sample preservation, contamination of samples and loss of analytes shall be prevented.

8.1 Sample processing

Weigh 0.2 g ~ 1.0 g of the sample, accurate to 0.001 g, into a 50 mL stoppered centrifuge tube. Immerse the sample in 5 mL of water. Slowly add 20 mL of anhydrous ethanol.

Shake it by a vortex oscillator, to make the mixture uniform. Place it in an ultrasonic extractor for ultrasonic extraction for 30 min. After the extraction, centrifuge at 4000 r/min for 10 min. Discard the supernatant. The insoluble material is washed by 10 mL of 80% ethanol solution, and centrifuged. Use water to transfer the above insoluble matter into a

round-bottomed flask. Add 50 mL of water. Perform ultrasonic extraction at 120 W for 30 min; repeat these operations twice. Cool it to room temperature. Filter it. Transfer the supernatant into a 200 mL volumetric flask. Wash the residue 2 ~ 3 times.

Transfer the washing solution to a volumetric flask. Add water to make its volume reach to the mark. This solution is the sample measurement solution (if the color is too deep, it can be decolorized by C18SPE small column, etc.).

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