Voluntary - Public

Date: 5/20/2010
GAIN Report Number: CH10026

China - Peoples Republic of

Post: Beijing

National Food Additive Standard - Sulphur

Report Categories:

FAIRS Subject Report

Approved By:
Mark Petry
Prepared By:
Wu Bugang

Report Highlights:
On May 5, 2010, China notified the WTO of "National Food Safety Standard: Food Additives - Sulphur " as SPS/N/CHN/249. This measure covers the requirements and testing methods for sulphur. The date for submission of final comments to the WTO is May 20, 2010. The proposed date of entry May 30, 2010. This report is an INFORMAL translation of this document.

General Information:

Summary

On May 5, 2010, China notified the WTO of "National Food Safety Standard: Food Additives - Sulphur " as SPS/N/CHN/249. This measure "applies to the production, circulation, supervision and management of food additive sulphur. It specifies the scope, requirements and testing methods." The date for submission of final comments to the WTO is May 20, 2010. The proposed date of entry May 30, 2010.

Thanks go to the Embassy of Australia in China for their assistance in translation of this measure.

This report contains an UNOFFICIAL translation of National Food Safety Standard: Food Additives - Sulphur.

BEGIN TRANSLATION

GB National Food Safety Standard
GB/T 5009.11—xxxx
To replace GB/T 5009.11—200

Forward

This standard replaces GB 3150—1999 Food Additives Sulphur national standard

The main technical differences between this standard and GB 3150—1999 are:

-Add sulphide indicator and testing method;

-Add gravimetric analysis in the determination of organic materials to parallel the original standard method with gravimetric analysis;

-Add silver diethyl dithio carbamate spectrophotometric method in determination of arsenic contents, which is parallel to the arsenic speckle.

The appendix A to this Standard is a normative appendix

Issued versions of the standard replaced by this standard:

-GB/T3150—1982 , GB/T3150—1999。

National Food Safety Standard

Food additives Sulphur

1 Scope

This standard is applicable to the food additive sulphur obtained from industrial sulphur after it is processed, treated and refined.

2 Normative References

The following normative documents contain provisions which, through reference in this text, constitute provisions of this standard. For dated references, subsequent amendments to, or revisions (not including correction of printing errors) of, any of these publications do not apply, while the parties who reach an agreement according to this standard are encouraged to study the possibility of using the latest version of these documents. For undated references, the latest version applies.

3 Molecular formula and relative atomic weight

Molecular formula：S

Relative atomic weight：32.065（according to 2007international relative atomic weight）

4 Requirements

4.1 Sensory requirements: shall meet the requirements specified in Table 1.

Table 1 Sensory requirement

Item	Requirements	Testing method
colour	Yellow or light yellow	Take appropriate specimen and put it into 50mL beaker, observe color and texture under natural light
texture	Powder or flake	

4.2 Physiochemical Requirements：shall meet the requirements specified in Table 2.

Table 2 Physiochemical Requirements

Item		Indicator	Testing method
Sulphur（S）, *w*/%	≥	99.9	Appendix A.4
Water, *w*/%	≤	0.1	Appendix A.5
Ash content, *w*/%	≤	0.03	Appendix A.6

Acidity[by H_2SO_4] , *w*/%	≤	0.003	Appendix A.7
Organic material , *w*/%	≤	0.03	Appendix A.8
Sulphide		Pass	Appendix A.9
Arsenic (As) , *w*/%	≤	0.0001	Appendix A.10

Appendix A

(Normative Appendix)

Testing method

A.1 Warning

Some reagents used in this testing method are toxic or corrosive, be cautious when exercising. If spilled on skin, immediately wash with water, or go for treatment if serious.

A.2 General conditions

Unless otherwise specified, the reagents and water referred in this standard refer to analytical pure reagents and the class III water provided in GB / T 6682-2008. Unless otherwise specified, the Standard Solution, impurity standard solution, preparations and products used in test shall be prepared according to the requirements specified in HG / T 3696.1, HG / T 3696.2, HG / T 3696.3.

A.3 Identification test

A.3.1 Reagent

A.3.1.1 Pridine

A.3.1.2 Sodium bicarbonate solution: 35 g/L.

A.3.2 Identification method

A.3.2.1 Melt at 115 ℃ into yellow liquid , and reheated to 160 ℃ to become black and sticky.

A.3.2.2 Burn on blue flame generating sulfur dioxide with irritating odor

A.3.2.3 Take about 1g sample, dissolve in 2 mL hot pyridine, add 0.2mL sodium bicarbonate solution to produce blue or green

A.4 Determination of Sulphur contents

A.4.1 Method summary

Refer 5.1.1.1 of GB/T 2449-2006

A.4.2 Calculation

Sulfur content is counted by sulfur (S) mass fraction w1, value is denoted by %, calculated according to formula (A.1)

$$w_1 = 100 - (w_2 + w_3 + w_4 + w_5) \quad \text{.....(A.1)}$$

In which :

w_2——ash content mass fraction obtained in A.6, %;

w_3——acidity mass fraction obtained in A.7, %;

w_4——organic material mass fraction obtained in A.8, %

w_5——Arsenic mass fraction obtained in A.10, %.

Calculation result keeps one decimal.

A.5 Determination of water content

Refer to Article 5.2 of GB/T 2449—2006.

A.6 Determination of ash content

Refer to Article 5.3 of GB/T 2449—2006.

A.7 Determination of acidity

Refer to Article 5.3 of GB/T 2449—2006.

A.8 Determination of organic material

A.8.1 Titration (arbitration method)

Refer to Article 5.5.1 of GB/T 2449—2006.

A.8.2 Gravimetric method

Refer to Article 5.5.2 of GB/T 2449—2006.

A.9 Determination of sulfide content

A.9.1 Reagent

A.9.1.1 Acetic acid: 1+3;

A.9.1.2 Lead nitrate solution: 1.6 g/L (prepared with newly boiled carbon dioxide-free water);

A.9.1.3 Sodium sulfide solution;

A.9.1.4 Acetate buffer solution: pH value: 3.5;

A.9.1.5 Lead standard solution：1mL solution with lead (Pb) 0.010mg

Take 1mL lead standard solution prepared according to HG / T 3696.2 by pipette, place in 100mL flask, dilute with water to the scale and shake well.

A.9.2 Analytical procedures

Weigh 5.0g sample, accurate to 0.01g, add 50mL hot water, place it in a beaker for 30 minutes during which frequently mix and filter. Dispense 10mL test solution A, place in 50mL colorimetric tube, add 2mL acetate buffer solution, 1mL lead nitrate solution, dilute with water to the mark, and shake well. Place in the dark for 5 minutes, its color not darker than the standard colorimetric solution.

Standard colorimetric solution: pipet 1mL lead standard solution, place in 50 mL colorimetric tube, add 2 mL acetate buffer solution, 10mL sodium sulfide solution, dilute to the scale of water, shake well. Place in the dark for 5 minutes.

A.10 Determination of arsenic content

A.10.1 Diethyl dithiocarbamate silver spectrophotometry (arbitration method)

Refer to Article 5.6.1 of GB/T 2449—2006.

Arsenic spot method

Refer to Article 5.6.2 of GB/T 2449—2006.

END TRANSLATION