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GAIN Report

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Voluntary - Public

Date: 8/13/2010

GAIN Report Number: CH10049

China - Peoples Republic of

Post: Beijing

National Food Additive Standard-Potassium Iodate

Report Categories:

FAIRS Subject Report

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Report Highlights:

On August 4, China's Ministry of Health notified the WTO of National Food Safety Standard-Food Additive Potassium Iodate as G/SPS/N/CHN/309. The date for submission of final comments to China is October 3, 2010. The proposed date of entry is to be determined. Contact information on where to send comments is inside the report. This report is an INFORMAL translation of this document.

Executive Summary:

On August 4, China's Ministry of Health notified the WTO of National Food Safety Standard-Food Additive Potassium Iodate as G/SPS/N/CHN/309. The date for submission of final comments to China is October 3, 2010. The proposed date of entry is to be determined.

Comments can be sent to the China WTO SPS Enquiry Point at: SPS@aqsic.gov.cn.

This report contains an INFORMAL translation of this document.

General Information:

BEGIN TRANSLATION

National food safety standard

Food Additive - Potassium iodate

(Draft for comments)

Issued on XX-XX-2010

Implemented on XX-XX-XXXX

Issued by the Ministry of Health of China

Foreword

Annex A to this standard shall be a normative annex.

1. Scope

This standard specifies the quality requirements and testing method for potassium iodate, an edible salt fortifier.

This standard shall be applicable for edible salt fortifier potassium iodate, which shall be used as iodine Fortier in edible salt processing.

2. Normative references

The references in this standard shall be indispensable for application of this standard. For references noted with a date, only the edition with such date shall be applicable for this standard; for references without any date, the latest edition (including all change lists) shall be applicable for this standard.

3. Name, molecular formula, relative molecular weight, and structural formula

3.1

Chemical name:

Potassium iodate

3.2

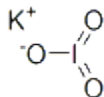
Molecular formula: KIO_3

3.3

Relative molecular weight: 214.00 (as per international atomic weight in 2005)

3.4

Structural formula:



Potassium iodate

4. Technical requirements

4.1 General requirements: generally, it shall meet the requirements in Table 1.

Table 1 General requirements

Requirements	Testing method
Quality of raw materials used for production	Shall meet the requirements of related quality standards and that for food safety sanitary inspection.
Packing and storage sign of potassium iodate	Shall meet the requirements of <i>Packaging-Pictorial Marking for Handling of Goods</i> (GB 191).
Testing and analysis reagent	Shall meet the requirements of <i>Chemical Reagent--Preparations of Standard Volumetric Solutions</i> (GB 601), <i>Chemical Reagent - Preparations of Standard Solutions for Impurity</i> (GB 602), <i>Chemical Reagent - Preparations of Reagent Solutions for Use in Test Methods</i> (GB 603), <i>General Principles for Sampling Chemical Products</i> (GB/T 6678), and <i>Water for Analytical Laboratory Use Specification and Test Methods</i> (GB 6682).

4.2 Sensory requirements: shall meet the requirements specified in Table 2.

Table 2 Sensory requirements

Name	Item	Requirements
Potassium iodate	Color and luster	Colorless or white
	Flavor and odor	Odorless, with slight astringent taste
	Textural state	Crystal or powder
	Dissolvability	Dissolve in water but not at all in ethanol

Note: Identification of potassium iodate shall be carried out in accordance with A.1 of Annex A.

4.3 Physical and chemical indicators: shall meet the requirements of Table 3.

Table 3 Physical and chemical indicators

Item	Indicator	Testing method
Content of potassium iodate (KIO_3) (after drying)	$\geq 99.0\%$	A.3 of Annex A
PH value of 5% potassium iodate solution	$= 5\sim 8$	A.2.1 of Annex A
Content of chlorate (calculated as ClO_3)	$\leq 100\text{mg/kg}$	A.2.2 of Annex A
Iodide (calculated as I)	$\leq 20\text{mg/kg}$	A.2.3 of Annex A
Drying loss	$\leq 0.5\%$	A.2.4 of Annex A
Content of heavy metal (calculated as Pb)	$\leq 4\text{mg/kg}$	A.2.5 of Annex A
Content of arsenic (As)	$\leq 3\text{mg/kg}$	A.2.6 of Annex A
Content of sulfate (calculated as SO_4)	$\leq 50\text{mg/kg}$	A.2.7 of Annex A

Identification of potassium iodate shall be carried out in accordance with A.1 of Annex A.

Annex A Testing Method

(Normative annex)

A.1 Identification

A.1.1 Iodate

Take 20mg of sample and add 5ml of water to dissolve; add 1 drop of sulfur dioxide saturated solution and shake up; add several drops of indicating liquid, and the color will become blue immediately.

A.1.2 Sylvite

Aqueous solution of this sample can show the identification reaction of sylvite, and see Annex III "General Identification Test - Sylvite" to *Chinese Medicine Dictionary* (Part 2, Edition 2005) for the identification method.

A.2 Inspection

A.2.1 Power of hydrogen

Power of hydrogen of solution shall be determined in accordance with the regulations in *Chemical Reagent--General Rules for the Determination of PH* (GB 9724).

A.2.2 Chlorate

The content of chlorate shall be determined in accordance with regulations in *Working Chemical—Potassium Iodate* (GB 1258).

A.2.3 Iodide

Iodide shall be determined in accordance with *Chinese Medicine Dictionary* (Part 2, Edition 2010).

A.2.4 Drying loss

According to Annex VIII "drying loss measurement method" to *Chinese Medicine Dictionary* (Part 2, Edition 2005), the sample shall be dried to constant weight at 105°C, and the weight loss shall not exceed 0.5%.

A.2.5 Heavy metal

Firstly, take 5.0g of the sample, and add 40ml of hydrochloric acid solution(1→2); and then, distilled to dry by water bath, and add 15ml of hydrochloric acid solution (1→2) to dissolve for the residue (adopt the above method for two times); thirdly, heat gradually till the residue becomes white, cool it, and add 20ml of water to dissolve; and then, use phenolphthalein as an indicator and drop ammonia test solution to neutral, and add water to 25ml, so as to provide test sample solution; take off 15ml of the test sample solution for times, add 2ml of diluted acetic acid, and add water to 25ml, so as to determine the content of heavy metal in accordance with *Method for Limit Test of Heavy Metals in Food Additives* (GB 8451).

A.2.6 Arsenic salt

Take 5ml of test sample solution remaining in the above heavy metal determination test, add water to dilute to 30ml, take off 20ml and add water to 23ml, and add 5ml of hydrochloric acid, so as to determine the content of arsenic in accordance with *Method for Determination of Arsenic in Food Additives* (GB 8450).

A.2.7 Sulfate

It shall be determined in accordance with *Chinese Medicine Dictionary* Part 2, Edition 2010) for determination of sulfate in potassium iodate.

A.3 Determination of content of potassium iodate

Take about 0.8g of the sample and weigh it precisely, place it in a measuring flask of 250ml, and add water to dissolve and dilute to the scale and shake up; take off 25ml precisely, place it into an iodine flask, add 2g of potassium iodide and 10ml of diluted hydrochloric acid, and plug the flask tightly and shake up; put it in shadow for 5min, add 100ml of water, and titrate it with

volumetric solution of sodium hyposulfite (0.1mol/L); near to the end, add 2ml of starch indicating liquid, and titrate it continuously till the blue disappear, and calibrate the titration results by blank test. 1ml of sodium hyposulfite volumetric solution(0.1mol/L) is equivalent to 3.567mg of KIO_3 .

END TRANSLATION