

# HJ

## **Standard for Environmental Protection of the People's Republic of China**

HJ 2533-2013

Replacing HJ/T 310-2006

### **Technical Requirement for Environmental Labelling Products**

#### **Mosquito-repellent incense**

Issued by Ministry of Environmental Protection

Issued on January 13, 2014

Putting into effect as of March 1, 2014

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## Foreword

This standard is developed for the purpose of implementing the Law of the People's Republic of China on Environmental Protection, minimizing the adverse impacts on human health and the environment during the use of mosquito-repellent incense.

This standard puts requirements on design, harmful substance emission, packages and recycle of mosquito-repellent incense.

This standard has carried out revisions on Technical Requirement for Environmental Labelling Products -- Mosquito-repellent Incense Coil (HJ/T 310-2006). The major changes are as follows:

- ◆ Name of the standard has been changed to “Mosquito-repellent Incense” from “Mosquito-repellent Incense Coil”.
- ◆ Applicable scope has been increased with electronic mosquito-repellent incense pieces and electronic mosquito-repellent incense liquid, and has changed mosquito-repellent incense coil to lighting mosquito-repellent incense.
- ◆ Soot emission load index of mosquito-repellent incense coil has been revised.
- ◆ Requirements on BHT, BHA and Phthalate have been increased.
- ◆ Requirements on solvent in electronic mosquito-repellent incense liquid, and requirements on adhesive in lighting mosquito-repellent incense have been increased.
- ◆ Requirements on packaging and recycling have been increased.
- ◆ Requirements on the effect have been included into basic requirement.

This standard is applicable to China Environmental Labelling products certification.

The development of this standard is organized by Department of Science, Technology and Standards, MEP.

Major drafters include Environmental Development Center of MEP and Committee of Household Sanitary Pesticide Specialties of China Daily Grocery Industrial Association.

This standard was approved by MEP on January, 13, 2014.

This standard takes effect on March, 1, 2014 in replacement of HJ/T 310-2006.

This standard will be explained by Ministry of Environmental Protection.

Standard versions substituted by this one include HBC 11-2002 and HJ/T 310-2006.

## **Technical Requirement for Environmental Labelling Products**

### **Mosquito-repellent Incense**

#### **1. Application Scope**

This standard specifies terminologies, definitions, basic requirements, technical contents and examination method for environmental labelling product —mosquito-repellent incense.

This standard is applicable to ignition mosquito-repellent incense, electronic mosquito-repellent incense pieces and electronic mosquito-repellent incense liquid.

#### **2. Standard Quotation Documents**

This standard has quoted articles in the following standards. The effective version of all quotation documents without specific date is applicable to this standard.

GB24330—2009 Safety and Technical Condition for Household Sanitary Pesticide

GB/T 18455 Packaging and Recycling Logo

GB/T 19378 Name and Code of Pesticide

GB/T 28015-2011 Household Sanitary Pesticide—Testing Method for Soot Emission Load

Department of Agriculture [2007] Decree 10 Regulation of Pesticide Registration Material

#### **3. Terminology and Definitions**

The following terminologies and definitions are applicable to this standard.

##### **3.1 Mosquito-repellent incense**

It refers to the preparation that repels and kills mosquitoes and insects, and can be ignited and fumed, or equipped with mosquito-repellent facility.

##### **3.2 Soot emission load**

It refers to the mass of the whole emitted smoke of ignition mosquito-repellent incense at certain volume at the completion of the combustion collected by filtering film (paper) with the unit of mg/g.

##### **3.3 Tar emission**

It refers to the tar ingredient of all smoke resulting from complete combustion of

ignition mosquito-repellent incense at certain volume extracted by ether. The expression unit is in mg/g.

#### **4. Basic Requirements**

- 4.1 The product quality shall meet requirements in relevant standards.
- 4.2 The pollution discharge of enterprises producing the product must meet the requirements of national or local pollution discharge standards.
- 4.3 The producer should enhance clean production.

#### **5. Technical Contents**

##### 5.1 Requirement on products

5.1.1 Toxicity of products should comply with the minor toxicity level in *Regulation on Pesticide Registration Material*.

5.1.2 The product should not contain BHT and BHA.

5.1.3 The product should not contain Phthalate listed in Annex A.

5.1.4 Electronic mosquito-repellent incense liquid should not contain benzene, toluene, dimethylbenzene and ethylbenzene.

5.1.5 Ignition mosquito-repellent incense should use water-based adhesives.

5.1.6 The soot emission load of ignition mosquito-repellent incense shall be not more than 5mg/g.

5.1.7 The tar emission of ignition mosquito-repellent incense shall be not more than 1.2mg/g.

##### 5.2 Requirement on Packaging

5.2.1 The total volume of heavy metals, such as Pb, Cd, Hg and Cr<sup>6+</sup> in Packaging materials should not exceed 100mg/kg.

5.2.2 Package should be marked according to GB/T 18455.

##### 5.3 Requirement on Recycling

Producers should provide relevant information on recycle and reuse of products.

#### **6. Testing method**

6.1 Testing of technical content 5.1.6 should be done according to GB/T 28015-2011.

6.2 Testing of technical content 5.1.7 should be done according to Annex B.

6.3 Other indexes in Technical Contents should be examined by document review and on-site inspection.

**Annex A****(Standard Annex)**  
Forbidden Phthalate

中文名称	英文名称	缩写
邻苯二甲酸二异壬酯	Di-iso-nonylphthalate	DINP
邻苯二甲酸二正辛酯	Di-n-octylphthalate	DNOP
邻苯二甲酸二(2-乙基己基)酯	Di-(2-ethylhexy)-phthalate	DEHP
邻苯二甲酸二异癸酯	Di-isodecylphthalate	DIDP
邻苯二甲酸丁基苄基酯	Butylbenzylphthalate	BBP
邻苯二甲酸二丁酯	Dibutylphthalate	DBP

## Annex B

### (Regulative Annex)

#### Determination Method for Tar Emission Load of Mosquito-repellent Incense

##### B.1 Equipment

Soxhlet extractor

Analytic Balance: (Division Value 0.1mg)

Drying Oven

Desiccator (allochroic silicagel inside)

##### B.2 Reagent

Absolute ether: analytical reagent

##### B.3 Procedures

Soot Sample can be prepared according to item E3 of Annex E of GB 24330-2009.

Use analytic balance to weigh the sampling filter paper, put the paper into extracting barrel of Soxhlet extractor, connect receipt bottle which has been dried and weighed exactly, add 40ml absolute ether through upper end of condenser pipe, put it on water bath for heating reflux for 4h. Take down receipt bottle, put it in drying oven at 105 °C for 1h when volatile ether(recyclable) is close to dryness. Move it to drying oven for 1h, use analytic balance weigh receipt bottle exactly. The weight difference of receipt bottle is weight of tar.

Result calculation:

$$D = [(M_1 - M_2) / M] * 1000$$

Where

D——Tar emission load of mosquito-repellent incense, mg/g;

M<sub>1</sub>——Mass of sample filter paper after sampling, g;

M<sub>2</sub>——Mass of sample filter paper before sampling, g;

M——Mass of sample mosquito-repellent incense coil, g;