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Technical Standard of International Seabuckthorn Association

# 团 体 标 准

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## 沙棘籽原花青素

(Seabuckthorn seed procyanidins)

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## 前 言 Preface

按照 GB/T1.1—2020《标准化工作导则 第1部分：标准化文件的结构和起草规则》的规定，起草本标准。

本标准由国际沙棘协会归口。

本标准的起草单位：北京宝得瑞健康产业有限公司，青海康普生物科技股份有限公司、完美（广东）日用品有限公司、河北神兴沙棘研究院、吕梁野山坡食品有限责任公司、鄂尔多斯市天骄食品有限公司、鸿泰农林科技开发有限公司、水利部沙棘开发管理中心（水利部水土保持植物开发管理中心）。

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This standard has been drafted in accordance with GB/ T1.1-2020 Guidelines for Standardization Work part 1: Structure and drafting rules for Standardization documents.

The international Sea buckthorn Association is responsible for this standard.

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# 沙棘籽原花青素

## Seabuckthorn Seed Procyanidins

### 1 范围

本标准规定了沙棘籽原花青素的规范性引用文件、术语和定义、技术要求、检验方法、检验规则、标签、标识、包装、贮存、运输。

本标准适用于沙棘籽原花青素，用于保健食品、特医食品、药品。

### 2 规范性引用文件

下列文件对于本文件的应用是必不可少的。凡是注明日期的引用文件，仅所注明日期的版本适用本文件。凡是不注明日期的引用文件，其最新版本（包括所有修改单）适用于本文件。

GB 2761 食品安全国家标准 食品中真菌毒素限量

GB 2762 食品安全国家标准 食品中污染物限量

GB 2763 食品安全国家标准 食品中农药最大残留限量

GB 4789.1 食品安全国家标准 食品微生物学检验 总则

GB 4789.2 食品安全国家标准 食品微生物学检验 菌落总数测定

GB 4789.3 食品安全国家标准 食品微生物学检验 大肠菌群计数

GB 4789.15 食品安全国家标准 食品微生物学检验 霉菌和酵母计数

GB 29921 食品安全国家标准 食品中致病菌限量

GB 4806.1 食品安全国家标准 食品接触材料及制品通用安全要求

GB 5009.3 食品安全国家标准 食品中水分的测定

GB 5009.4 食品安全国家标准 食品中灰分的测定

GB 5009.12 食品安全国家标准 食品中铅的测定

GB 5009.22 食品安全国家标准 食品中黄曲霉毒素 B 族和 G 族的测定

GB 5749 生活饮用水卫生标准

GB 7718 食品安全国家标准 预包装食品标签通则

GB 28050 食品安全国家标准 预包装食品营养标签通则

GB 31640 食品安全国家标准 食用酒精

保健食品理化及卫生指标检验与评价技术指导原则（2020年版），第二部分

## 1 Scope

This standard stipulates normative reference documents, terms and definitions, technical requirements, inspection methods, inspection rules, labels, labeling, packaging, storage and transportation of seabuckthorn seed procyanidins.

This standard applies to seabuckthorn seed procyanidins, used in health food, special medical food and medicine.

## 2 Normative reference documents

The following documents are essential for the application of this document. For dated references, only the dated version applies. For undated references, the latest version (including all amendments) of this document applies.

GB 2761 National Standard for Food Safety: Limits of mycotoxins in food

GB 2762 National Standard for Food Safety: Limits of contaminants in food

GB 2763 National Standard for food safety: Maximum residue limit of pesticide in food

GB 4789.1 National Standard for food safety: General provisions for food microbiological testing

GB 4789.2 National standard for food safety: Determination of total number of bacteria in food microbiology

GB 4789.3 National standard for food safety: Food microbiology test coliform count

GB 4789.15 National standard for food safety: Food microbiology test of mould and yeast counts

GB 29921 National Standard for Food Safety: Limit of pathogenic bacteria in food

GB 4806.1 National Standard for food safety: General safety requirements for food contact materials and products

GB 5009.3 National standard for food safety: Determination of moisture in food

GB 5009.4 National standard for food Safety: Determination of ash content in food

GB 5009.12 National Standard for Food Safety: Determination of lead in food

GB 5009.22 National Standard for Food Safety: Determination of Aflatoxin groups B and G in food Hygienic standard for drinking water

GB 7718 National Standard for Food safety: General rules for labeling prepackaged food

GB 28050 National Standard for Food safety: General rules for nutrition labeling of prepackaged food

GB 31640 National standard for food safety: Edible alcohol

Technical Guidelines for the Inspection and Evaluation of Physicochemical and hygienic Indicators of health food (2020 edition), Part ii

## 3 术语和定义

### 3 Terms and definitions

#### 3.1 原花青素 (Procyanidins)

原花青素是一类黄烷-3-醇类单体及其 $C_4-C_8$ 或 $C_4-C_6$ 键连接而成聚合体的多羟基化合物，分子骨架为 $C_6C_3C_6$ 。

Proanthocyanidins are polyhydroxy compounds of flavane-3-alcohol monomers and their C4-C8 or C4-C6 bonds which form polymers, molecular bones  
Frame for C6C3C6.

### 3.2 脱脂沙棘籽 (Degrease sea buckthorn seed)

沙棘籽经过脱脂后, 含油小于2%的沙棘籽粕。

### 3.3 沙棘籽原花青素 (Sea buckthorn seed procyanidins)

以脱脂沙棘籽为原料, 用水、食用酒精中一种或两种提取、浓缩、干燥加工的黄褐色至棕褐色粉末。

Seabuckthorn seed meal containing less than 2% oil after degreased.

## 4 技术要求

### 4 Technical Requirements

#### 4.1 原料

##### 4.1 the raw material

脱脂沙棘籽应干燥、无霉变, 无正常视力可见外来杂质, 原花青素含量在4% 以上。

Defatted seabuckthorn seeds should be dry, mildew free, no foreign impurities visible in normal vision, and proanthocyanidins content above 4%.

#### 4.2 加工助剂

##### 4.2 Processing agent

4.2.1 食用酒精应符合GB 31640的规定。

4.2.1 Edible alcohol shall comply with the provisions of GB 31640.

4.2.2 生产用水应符合GB 5749的规定。

4.2.2 Water used for production shall comply with GB 5749.

#### 4.3 感官要求

##### 4.3 Sensory Requirements

感官要求应符合表1的规定。

Sensory requirements shall be in accordance with table 1.

表1 感官要求

Table 1 Sensory requirements

项 目Project	要 求 Requirements
色泽color	黄褐色至棕褐色粉末Yellow brown to tan powder
滋味、气味Taste and smell	具有沙棘籽原花青素特有的滋味、气味, 无异味 seabuckthorn seed procyanidins unique taste and smell, no peculiar smell

杂质 Impurities	无正常视力可见外来杂质No foreign impurities visible in normal vision
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#### 4.4 标志性成分

标志性成分应符合表2的规定。

#### 4.4 Signature Ingredients

The signature components shall comply with the requirements in Table 2.

表2 标志性成分

Table 2 Signature ingredients

项 目Project	指 标 indicators	
	一级G1	二级G2
原花青素, % Procyanidins, %	30(含) -50	15-30(不含)

#### 4.5 理化要求

理化要求应符合表3的规定。

#### 4.5 Physical and Chemical Requirements

Physical and chemical requirements should be in accordance with the provisions of Table 3.

表3 理化要求

Table 3 Physical and chemical requirements

项 目Project	要 求Requirements
水分, % ≤ Moisture, % ≤	5.0
灰分, % ≤ Ash content, % ≤	5.0

#### 4.6 污染物要求和真菌毒素要求

4.6.1 污染物应符合GB2762的要求, 详见表4。

表4 污染物要求

项 目Project	要 求requirements
铅, mg/kg ≤ Lead, mg/kg or less	1.0

4.6.2 真菌毒素应符合GB2761的要求, 详见表5。

4.6.2 Mycotoxins should meet the requirements of GB2761, as shown in Table 5.

表5 真菌毒素要求

Table 5 Mycotoxin requirements

项 目Project	要 求requirements
黄曲霉毒素B1, ug/kg ≤ Aflatoxin B1, ug/kg ≤	5.0

4.6.3 农残限量应符合GB2763的要求

4.6.3 The limits of agricultural residues shall meet the requirements of GB2763

#### 4.7 微生物要求

4.7.1 微生物要求应符合表6的规定。

4.7 Microbial Requirements

4.7.1 Microbial requirements shall comply with the provisions of Table 6.

表6 微生物要求

Table 6 Microbial requirements

项 目Project	采样方案及限量Sampling scheme and limits			
	n	c	m	M
菌落总数, CFU/gTotal colonies, CFU/g	5	2	10 <sup>3</sup>	5×10 <sup>4</sup>
大肠菌群, CFU/gColiform, CFU/g	5	2	10	10 <sup>2</sup>
霉菌, CFU/g≤Mold, CFU/g≤	50			
注: 样品的采样及处理按GB4789.1。 Note: Sample sampling and treatment according to GB4789.1.				

4.7.2 致病菌符合GB29921的要求。

4.7.2 Pathogenic bacteria meet the requirements of GB29921.

## 5 检验方法

5 Test Method

### 5.1 感官要求

5.1 Sensory requirements

取适量样品于白瓷盘中, 在自然光下观察色泽和杂质; 取3g试样于100ml烧杯中, 温水溶解, 用玻璃杯迅速搅拌, 并嗅其气味、品尝滋味。

Take a proper amount of samples on the white porcelain plate, observe the color and impurity under natural light; Take 3g sample in 100ml beaker, dissolve in warm water, stir it quickly with glass, smell and taste.

### 5.2 原花青素

5.2 Procyanidins

按保健食品理化及卫生指标检验与评价技术指导原则(2020年版), 第二部分, 保健食品中前花青素的测定的方法执行。

The method of determination of proanthocyanidins in health food is carried out according to the

technical Guidelines for inspection and Evaluation of Physical and chemical and health Indicators of health food (2020 edition), Part II.

### **5.3 水分**

5.3 the moisture

按GB 5009.3的方法执行。

Perform this operation according to GB 5009.3.

### **5.4 灰分**

5.4 Ash

按GB 5009.4的方法执行。

Follow GB 5009.4.

### **5.5 铅**

5.5 Lead

按GB 5009.12的方法执行。

Follow GB 5009.12.

### **5.6 黄曲霉毒素B1**

5.6 Aflatoxin B1

按GB 5009.22的方法执行。

Follow the GB 5009.22 method.

### **5.7 菌落总数**

5.7 Total number of colonies

按GB 4789.2的方法执行。

Execute according to GB 4789.2.

### **5.8 大肠菌群**

5.8 Coliform bacteria

按GB 4789.3的方法执行。

Execute according to GB 4789.3.

### **5.9 霉菌**

5.9 The mold

按GB 4789.15的方法执行。

According to the method of GB 4789.15.

## **6 检验规则**

6 Inspection Rules

### **6.1 组批原则**

6.1 Group Batch Rules

由同一批原料、同一班次、同一条生产线生产的包装完好的同一品种、同一规格产品为一组批。

The products of the same variety and specification with intact packaging produced by the same batch of raw materials, the same shift and the same production line shall be a group of batches.

## 6.2 抽样方法和数量

### 6.2 Sampling method and quantity

预包装的产品，每批取样3件，在灌装过程中，分别在包装的前5件、中间、后5件中进行抽样，抽样为200g/件。样品应从包装完好的产品中抽取。

For pre-packed products, 3 pieces shall be sampled in each lot. During the filling process, samples shall be taken from the first 5 pieces, middle 5 pieces and last 5 pieces of the package respectively, and the sample shall be 200g/ piece. Samples should be taken from well-packed products.

## 6.3 出厂检验

### 6.3 Delivery inspection

每批产品出厂前，生产厂质检部门都应对本批产品进行出厂检验。出厂检验的项目包括感官指标、水分、灰分、标志性成分、菌落总数、大肠菌群、霉菌、标签和包装。其它项目做不定期检验，经检验合格并附合格证的产品方可出厂。

Before each batch of products leave the factory, the quality inspection department of the factory shall carry out the factory inspection. Items for factory inspection include sensory indicators, moisture, ash, signature ingredients, colony count, coliform, mold, label and packaging. Other items are inspected irregularly, and the products with qualified certificates can leave the factory.

## 6.4 型式检验

### 6.4 Type inspection

型式检验项目应包括本标准规定的全部项目，正常生产时，每年进行一次型式检验。有下列情况之一者，也应进行型式检验。

- a. 原料、设备或工艺有较大改变，有可能影响产品质量时；
- b. 产品停产半年及以上，恢复生产时；
- c. 出厂检验结果与上次型式检验有较大差异时；
- d. 国家质量监督机构提出进行型式检验时。

Type inspection items shall include all items specified in this standard and shall be conducted once a year during normal production. Type inspection should also be carried out in one of the following cases.

- A. Major changes in raw materials, equipment or process may affect product quality;
- B. When the product is stopped for half a year or more and the production resumes;
- C. There is a big difference between the results of the ex-factory inspection and the last type inspection;
- D. When the state quality supervision agency proposes to conduct type inspection.

## 6.5 判定规则

### 6.5 Decision Rules

6.5.1 检验结果全部符合技术要求规定时，判定该批次产品为合格产品。

6.5.2 检验结果中如果感官要求、水分、灰分、标志性成分不符合本标准要求时，可从该批产品中抽取两倍样品，对不合格项目进行复检。若复检结果仍有一项或一项以上指标不符合本标准要求，则判定该批产品为不合格产品；若微生物指标要求中有一项不符合本标准要求，则判定该批产品为不合格产品。

6.5.1 When all the inspection results meet the technical requirements, the batch of products shall be judged as qualified products.

6.5.2 If sensory requirements, moisture, ash and signature components in the inspection results do not meet the requirements of this standard, samples of twice of the batch of products can be taken for reinspection of the unqualified items. If the reinspection results still have one or more indicators do not meet the requirements of this standard, the batch of products will be judged as unqualified products; If one of the requirements for microbial indicators does not meet the requirements of this standard, the batch of products will be judged as unqualified.

## **7 标签、标识**

### 7 Labels and marks

标签和标识应符合GB 7718和GB 28050的规定。

Labels and marks shall conform to GB 7718 and GB 28050.

## **8 包装、贮存、运输**

### 8 Packing, storage and transportation

#### **8.1 包装**

##### 8.1 the packing

内包装材料应符合GB 4806.1的规定。

The inner packing material should comply with GB 4806.1.

#### **8.2 贮存**

##### 8.2 the storage

产品应保存在通风、阴凉、干燥的仓库中，避光、避免受潮，不得与有毒有害物质混贮。

Products should be stored in a ventilated, cool and dry warehouse, away from light and damp, and not mixed with toxic and harmful substances.

#### **8.3 运输**

##### 8.3 transportation

本品在运输中不能与酸、碱及有毒有害物质混运。运输时必须有遮盖物，避免日晒、雨淋、受热及撞击。搬运装卸应小心轻放。

This product can not be mixed with acid, alkali and toxic and harmful substances during transportation. Cover must be provided during transportation to avoid sun, rain, heat and

impact. Handling and handling should be handled with care.