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MS 871 (2001) (English): SPECIFICATION FOR  
MALAYSIAN COCOA POWDER (SECOND REVISION)



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# **MALAYSIAN STANDARD**

**MS 871 : 2001**

## **SPECIFICATION FOR MALAYSIAN COCOA POWDER (SECOND REVISION)**

**ICS : 67.140.30**

Descriptors : cocoa powder, composition, requirements, types, quality, hygiene, packaging, labelling and storage

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### **Committee representation**

The Food and Agriculture Industry Standards Committee (ISC A) under whose supervision this Malaysian Standard was developed, comprises representatives from the following organisations:

Department of Agriculture  
Federal Agricultural Marketing Authority  
Federation of Malaysian Manufacturers  
Malaysian Palm Oil Association  
Malaysian Agricultural Research and Development Institute  
Ministry of Agriculture  
Ministry of Health  
Universiti Kebangsaan Malaysia  
Universiti Putra Malaysia  
Universiti Teknologi MARA

The Working Group on Cocoa and Cocoa Products which developed this Malaysian Standard consists of representatives from the following organisations:

Cadbury Confectionery (M) Sdn Bhd  
Department of Agriculture Malaysia  
KL-Kepong Cocoa Products Sdn Bhd  
Malaysia Cocoa Board  
Malaysia Cocoa Manufacturing Sdn Bhd  
Malaysian Agricultural Research and Development Institute  
Ministry of Health  
Universiti Kebangsaan Malaysia  
Universiti Putra Malaysia

## FOREWORD

This Malaysian Standard was developed by the Working Group on Cocoa and Cocoa Products under the authority of Food and Agriculture Industry Standards Committee.

During the development of this standard, reference was made to the following:

- a) Codex Committee on Cocoa Products and Chocolate, Proposed draft revised standard for Cocoa Powders (Cocoas) and Dry Cocoa-Sugar Mixtures (1999).
- b) The Malaysia Food Act 1983 and Malaysian Food Regulations 1985.

This standard is also based on information obtained from the industry. The verification of requirements in the parameters stated in Table 2 is obtained by analysis of samples.

The significant modifications made to this standard are as follows:

- a) The term 'alkalised cocoa powder' is removed from the standard.
- b) Acidity Regulators are used to replace Alkalising agents.
- c) The types of cocoa powder are classified into three categories of high, medium and low.
- d) The composition of 'Copper (Cu)' in cocoa powder is removed from the standard.

This revised Malaysian Standard cancels and replaces MS 871:1988, "Specification for Malaysian Cocoa Powder (First Revision)".

Compliance with a Malaysian Standard does not of itself confer immunity from legal obligations.

## **SPECIFICATION FOR MALAYSIAN COCOA POWDER (SECOND REVISION)**

### **1. Scope**

**1.1** This Malaysian Standard specifies the quality requirements and methods of test and sampling for cocoa powder.

### **2. Referenced documents**

The following referenced documents contain provisions which, through reference in this text, constitute provisions of this Malaysian Standard. For dated references, where there are subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this Malaysian Standard are encouraged to investigate the possibility of applying the most recent editions of the referenced documents. For undated references, the latest edition of the publication referred to applies.

MS 1119 Method of analysis for Malaysian cocoa butter and Malaysian cocoa powder.

MS 1263: Method of sampling of Malaysian cocoa powder and Malaysian cocoa butter.

### **3. Description**

**3.1** Cocoa powder is the final product obtained by mechanical pulverization of cocoa press cake. The colour and flavour of cocoa powder may be modified using acidity regulators.

### **4. Definitions**

For the purposes of this Malaysian Standard, the following shall apply.

#### **4.1 Acidity Regulators**

A food additive used to raise or to lower the pH of substance. The food additive added may be carbonates, hydrogen carbonate and hydroxide of sodium, potassium, magnesium or ammonium. Others include phosphoric acid, citric acid or L-tartaric acid.

#### **4.2 Cocoa bean**

Cocoa bean shall mean the merchantable quality and dried, whole seed of *Theobroma cacao* L.

#### **4.3 Cocoa nib**

A product obtained from cocoa bean, which have been cleaned and freed from shell as thoroughly as it is technically possible.



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### **4.4 Cocoa mass (cocoa liquor)**

A product obtained by the mechanical disintegration of cocoa nib without removal or addition of any of its constituents.

### **4.5 Cocoa press cake**

A product obtained by partial removal of fat from cocoa nib or cocoa mass by mechanical means.

## **5. Types of cocoa powder**

The types of product are as classified in Table 1.

**Table 1. Types of cocoa powder**

| <b>Type</b> | <b>Fat content (residual cocoa butter on moisture basis) % by weight</b> |
|-------------|--|
| HIGH        | $\geq 20$  |
| MEDIUM      | $> 12$ to $< 20$   |
| LOW         | $\leq 12$  |

## **6. Composition and requirements for cocoa powder**

Cocoa powder shall also comply with the requirements stated in Table 2.

**Table 2. Composition and requirements for cocoa powder**

| <b>Characteristic</b>                                | <b>Requirements</b> |
|--|---------------------|
| Moisture content, % by weight, max                   | 5.0 %               |
| Fineness (wet, through 75 micron sieve)<br>% w/w min | 99 %                |
| Cocoa shell, % by weight, max.                       | 1.75 %              |

**Table 2. Composition and requirements for cocoa powder** (*continued*)

| Characteristic                     | Requirements |
|------------------------------------|--------------|
| Ash % m/m, max                     |              |
| Natural Powder                     | 10 %         |
| Alkalized Powder                   | 14 %         |
| Arsenic (As), ppm, max             | 1            |
| Lead (Pb), ppm, max                | 2            |
| Cadmium (Cd), ppm, max             | 1            |
| Standard plate count per gram, max | 5,000        |
| Yeast and mould per gram, max      | 50           |
| <i>Enterobacteriaceae</i> per gram | Negative     |
| <i>E. coli</i> per gram            | Negative     |
| <i>Salmonella</i> per 25 gram      | Negative     |

## 7. Hygiene

**7.1** The hygienic practices shall comply with all the relevant statutory requirements or regulations relating to food processing, packaging, handling and hygiene currently in force in Malaysia.

**7.2** To the extent possible in good manufacturing practice, the cocoa powder shall be free from objectionable matter.

**7.3** When tested by appropriate methods of sampling and examination, the products shall not contain pathogenic microorganisms or any substance originating from microorganisms in amounts, which may represent a hazard to health.

## 8. Packaging and labelling

### 8.1 Packaging

**8.1.1** The product shall be packed in suitable containers that are non-toxic, non-hazardous to health and which shall be so constructed as to provide optimum protection from normal hazard of handling and transportation.

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**8.1.2** Bulk or value packages of which the quantities are about 25 kg or more, packages shall be packed in bags.

### **8.2 Labelling**

The following particulars shall be marked legibly and indelibly on the label of the container.

- a) The name of the product as described in 2.1 of the standard shall be:  
'Cocoa Powder, Produce of Malaysia' ;
- b) Name and address of the manufacturer, packer and distributor;
- c) Lot identification, batch or code number shall be embossed or otherwise permanently marked to identify the producing factory and the lot;
- d) Net weight shall be declared in metric units;
- e) The fat content value; and
- f) Date of manufacturing or Expiry Date.

### **9. Storage**

The guidelines to storage of cocoa powder are as stated in Appendix A.

### **10. Method of test and sampling**

The method of test and sampling shall be carried out as specified in MS 1119 and MS 1263.

### **11. Legal requirement**

The product shall in all other aspect comply with the requirements of the legislation currently in force in the country.

### **12. Compliance**

When on testing, random samples are found to conform to the requirements specified in this standard, the lot, batch or consignment, from which the samples have been drawn, shall be deemed to comply with this standard.

### **13. Certification mark**

Each product, may by arrangement with a recognised certification body, be marked with the certification mark of that body, provided the product conforms to the requirements of the Malaysian Standard.

**Appendix A**  
(informative)

**Guide to storage of cocoa powder**

The optimal conditions for storage are as follows:

- a) A low relative humidity of the surrounding air, if possible under 65%;
- b) A temperature not exceeding 23°C, fluctuations in temperature should be avoided;
- c) Clean, well lit rooms, free of insects, rodents and other vermin;
- d) Absence of strong smelling foreign odours;
- e) Do not stack higher than 22 bags of 25 kg; and
- f) Stack at an adequate distance from both walls and floor.

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