

1. SCOPE

- 1.1 This standard prescribes the requirements for cocoa intended for human consumption.
- 1.2 Recommendations relating to storage are given in Appendix A.

2. DESCRIPTION

- 2.1 Cocoa powder is the final product obtained by mechanical pulverization of cocoa powder press cake. Cocoa powder may be alkalisied or non-alkalisied (natural).

3. DEFINITIONS

- 3.1 Alkalisiation, is process whereby a suitable alkalisying agent is introduced to the cocoa beans or cocoa nibs, or cocoa mass or cocoa press cake to raise the pH to desired level.
- 3.2 Alkalisiation agent, is an alkaline sustance used to raise the pH or to reduce the acidity. The salt can be carbonates, hydroxides or bicarbonates of sodium, potassium, magnesium or ammonium.
- 3.3 Alkalisied cocoa powder, is the product obtained from alkalisied cocoa nibs or cocoa liquor or cocoa press cake.
- 3.4 Cocoa beans, are the seeds of the cocoa tree (*Theobroma cacao* L.). Commecially and for the purpose of this Malaysian Standard the term refers to the whole seed which has been fermented and dried.
- 3.5 Cocoa butter, is the fat obtained from cocoa nib (see MS 1118, 'Specification for Malaysian Cocoa Butter').
- 3.6 Cocoa mass (cocoa liquor), is the fat obtained by the mechanical disintegration of cocoa nib without removal or addition of any of its constituents.
- 3.7 Cocoa nib, is the product obtained from cocoa beans which have been cleaned and freed from shell and germs as thoroughly as it is technically possible.
- 3.8 Cocoa press cake, is the product obtained by partial removal of fat from cocoa nib or cocoa mass by mechanical means.
- 3.9 Foreign matter, is any substance other than cocoa powder, in excess of permissible levels.
- 3.10 Natural/non-alkalisied cocoa powder, is the product obtained from cocoa liquor or cocoa press cake without alkalisiation.

4. TYPES

- 4.1 The materials shall be of two types namely high fat, and low fat powder abbreviated as HF LF as in Table 1.

Table 1. Types of cocoa powder

Type	Fat content (residual cocoa butter on moisture free basis) % by weight
HF	20 to 24
LF	8 to 12

5. ESSENTIAL COMPOSITION AND QUALITY FACTORS

- 5.1 Composition and requirements for natural and alkalisied cocoa powder (Table 2).

6. METAL TOLERANCES

	Maximum level on the cocoa fraction (ppm)
Arsenic (As)	1
Copper (Cu)	50
Lead (Pb)	2

7. HYGIENE

- 7.1 The hygienic practices shall comply with all the relevant statutory requirements or regulation relating to food processing, packaging, handling and hygiene currently enforced in Malaysia.
- 7.2 The the extent possible in good manufacturing practice, the cocoa powder shall be free from foreign matter.
- 7.3 When tested by appropriate methods of sampling and examination, the products shall not contain pathogenic micro-organisms or any substance originating from micro-organisms in amounts which may represent a hazard to health.

8. PACKING AND LABELLING

8.1 Packing

- 8.1.1 The material shall be packed in clean, sound and suitable packing material as tinfoil, glass, cellophane bags, metal foil, plastic films, laminates or other materials which are acceptable, sealed airtight and moisture-proof.

8.2 Size of packages

- 8.2.1 For quantities less than 1 kg or more than 50 g packages should conform to any of the following quantities by nett weight: 50 g, 100 g, 250 g, 500 g, 750 g or 1,000 g. Other sizes to be agreed upon between the relevant parties.
- 8.3 Labelling
- 8.3.1 The following particulars shall be marked legibly and indelibly on the label of the container.
- (a) The name of the product described under 2.1 of the standard shall be:

‘ natural cocoa powder’ or Alkalised cocoa powder’
 - (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) Nett weight shall be declared in metric units.
 - (e) The fat content value.
- 8.3.2 All packages and containers may, by prior arrangement with the Standards and Industrial Research Institute of Malaysia be marked with the SIRIM Certification Mark.
9. ANALYSIS
- 9.1 Analysis shall be carried out in accordance laid down in MS 1119, ‘ Method of analysis for Malaysian cocoa powder and Malaysian cocoa butter’. For bacteriological examinations samples shall as far as possible, consists of complete unopened packages.
- 9.2 Quality of reagents
- 9.2.1 Unless specified otherwise pure chemicals and distilled water (see MS 510, ‘Specification for water for laboratory use’) shall be employed in analysis done.
10. SAMPLING
- 10.1 Sampling procedure of Malaysian cocoa powder to be in accordance with MS*
11. LEGAL REQUIREMENT
- 11.1 The product shall in all other aspects comply with the requirements of the legislations currently enforced in the country.
12. COMPLIANCE
- 12.1 When on testing, each of the samples if found to conform to the requirements specified in this specification, the lot, batch, consignment from which the samples have been drawn, shall be deemed to comply with the standard specification.

*MS _____, ‘Method of sampling for Malaysian cocoa powder and Malaysian cocoa butter’ (under preparation.
MS 871 : 1988

Appendix A **Guide to storage**

The optimal conditions for storage are:

- a. A low relative humidity of the surrounding air, if possible under 50%.
- b. A temperature not exceeding 20° C and preferably between 15° C and 18° C, fluctuations in temperature should e avoided.
- c. Clean, wee-lit rooms, free of insects, rodents and other vermin.
- d. Absence of strong smelling foreign odours.
- e. Do not stack higher than 20 bags.
- f. Stack at an adequate distance from both walls and floor.