

PHILIPPINE NATIONAL STANDARD

PNS/BAFS 111:2021
ICS 67.190

Cacao mass (Philippine *Tablea*)- Specifications



BUREAU OF AGRICULTURE AND FISHERIES STANDARDS
BPI Compound Visayas Avenue, Diliman, Quezon City 1101 Philippines
Trunkline: **(632) 928-8741 to 64 loc. 3301-3319**
E-mail: **info.dabafs@gmail.com**
Website: **www.bafs.da.gov.ph**

Foreword

At the request of the Cebu Cacao Industry Development Council, the Bureau of Agriculture and Fisheries Standards (BAFS) initially reviewed the Philippine National Standard (PNS) for Philippine *Tablea* (PNS/BAFPS 111:2012) in 2020 to assess the relevance of the standard in the light of the existing regulatory and market requirements. A Technical Working Group (TWG), created through Special Order No. 442, series of 2020 and Special Order No. 81, series of 2021 (Creation of TWGs for the Development of PNS for Agriculture and Fishery Products, Machinery and Equipment composed of members from the public and private sectors, further reviewed and subsequently revised the standard. In 2021, the Department of Agriculture Secretary approved the revised standard on cacao mass/Philippine *Tablea* (PNS/BAFS 111:2021). It cancels and replaces PNS/BAFPS 111:2011(Philippine *Tablea*) following its technical revision.

The technical revision of this standard includes the following significant changes:

1. Modification of the title from Philippine *Tablea* to Cacao mass (Philippine *Tablea*);
2. Inclusion of “unfermented beans” as source of cacao mass in the scope of the standard;
3. Modification on the definition of crude fat in Clause 3 (Terms and definitions);
4. Minimum value of crude fat content on Clause 4.1 (Identity or composition);
5. Modification and addition of optional labeling requirements in Clause 9 (Labeling); and
6. Modification on the methods of analysis and sampling in Clause 10 (Methods of analysis and sampling).

This document was drafted in accordance with the editorial rules of the BPS Directives, Part 2.

1 Scope

This standard applies to cacao mass (Philippine *Tablea*), made from pure (100%) cacao or cocoa bean (*Theobroma cacao* L.), either fermented or unfermented, dried, roasted, dehulled, ground, and molded without added ingredients and additives. The cacao mass (Philippine *Tablea*) is intended for direct human consumption or as an ingredient in the manufacture of chocolate and chocolate products.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the cited edition applies. For undated references, the latest edition of the referenced document (including any amendments) applies:

Bureau of Agriculture and Product Standards (BAFPS)- Department of Agriculture (DA). (2012). *Code of practice for Philippine Tablea* (PNS/BAFS 88:2012). [http://www.bafs.da.gov.ph/bafs_admin/admin_page/pns_file/PNS-BAFPS%20882012%20-%20Code%20of%20practice%20for%20Phil%20tablea%20\(1\).pdf](http://www.bafs.da.gov.ph/bafs_admin/admin_page/pns_file/PNS-BAFPS%20882012%20-%20Code%20of%20practice%20for%20Phil%20tablea%20(1).pdf)

Codex Alimentarius Commission (CAC)- Food and Agriculture Organization (FAO). (2020). *Code of practice- general principles of food hygiene* (CAC/RCP 1-1969). http://www.fao.org/fao-who-codexalimentarius/sh-proxy/en/?Ink+1&url+https%253A%252F%252Fworkspace.fao.org%252Fsites%252Fcodex%252FStandards%252FCXC%2B1-1969%252FCXC_001e.pdf

CAC- FAO. (2018) *Codex general standard for labeling of pre-packaged foods* (CODEX STAN 1-2018). http://www.fao.org/fao-who-codexalimentarius/sh-proxy/en/?Ink=1&url=https%253A%252F%252Fworkspace.fao.org%252Fsites%252FCodex%252FStandards%252FCXS%2B1-1985%252FCXS_001e.pdf

Food and Drug Administration (FDA)- Department of Health (DOH). (2013). *Guidelines for the assessment of microbiological quality of processed foods* (Circular No. 2013-010). <https://ww2.fda.gov.ph/attachments/article/17218/FC2013-010.pdf>

FDA- DOH. (2004). *Revised guidelines on current good manufacturing practice in manufacturing, packing, repacking or holding food* (Administrative Order 153 Series of 2004). <https://ww2.fda.gov.ph/attachments/article/226398/AO153s2004.pdf>

FDA- DOH. (2014). *Revised rules and regulations governing the labelling of prepackaged food products distributed in the Philippines* (Administrative Order No. 2014-0030). <https://www.fda.gov.ph/wp-content/uploads/2020/04/Administrative-Order-No.-2014-0030-A.pdf>

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply:

3.1

cacao mass (Philippine *Tablea*)

fermented or unfermented, dried, roasted, dehulled, ground, and molded mass of pure (100%) cacao beans without added ingredients and additives

3.2

crude fat

true fats and oils, fatty acid esters, compound lipids, fat-soluble vitamins or provitamins, indigestible waxes, resins, and essential oils obtained from fermented or unfermented, dried, roasted, ground, and molded cocoa beans with no added ingredients and additives

3.3

moisture content

percentage weight of water in relation to the dry weight of the product

3.4

pH

measure of acidity and alkalinity used as a marker to indicate that no acid or neutralizer has been added to the cacao beans

3.5

water activity

ratio of vapor pressure of water in the product to the vapor pressure of pure water at the same temperature; measure of water available for the growth of microorganisms

4 Essential composition and quality factors

4.1 Identity or composition

The identity or composition of cacao mass (Philippine *Tablea*) is shown in Table 1.

Table 1. Physical and chemical properties of cacao mass (Philippine *Tablea*)

Parameters	Value
Particle size (microns)	<100
pH	5-6
Moisture (%), max.	3
Water activity, max.	0.6
Crude fat content (g/100g)	> 45

4.2 Quality characteristics (Color, odor and taste)

The cacao mass (Philippine *Tablea*) shall have chocolate brown color, characteristic chocolate aroma, distinct chocolate flavor with a certain level of bitterness, astringency, and acidity.

5 Additives

The cacao mass (Philippine *Tablea*) shall have no additives.

6 Contaminants

The cacao mass (Philippine *Tablea*) which falls under the category of cacao or cocoa mass should comply with maximum levels of the Codex general standard for contaminants and toxins in food and feed (CXS 193-2019).

7 Pesticide residues

The cacao mass (Philippine *Tablea*) should comply with the maximum residue limits for pesticides established by the CAC-FAO or by the competent authority.

8 Hygiene

Cacao mass (Philippine *Tablea*) shall comply with any microbiological criteria guidelines established by the competent authority. Cacao mass (Philippine *Tablea*) shall also be prepared and handled in accordance with the appropriate sections of the following:

- 8.1 Code of Practice for Philippine *Tablea* (PNS/BAFS 88:2012);
- 8.2 FDA Circular No. 2013-010 (Guidelines for the assessment of microbiological quality of processed foods);
- 8.3 FDA Administrative Order 153, series of 2004 (Revised guidelines on current good manufacturing practice in manufacturing, packing, repacking or holding food); and
- 8.4 Recommended international code of practice-general principles of food hygiene (CAC/RCP 1-1969) and other relevant Codex texts such as codes of hygienic practice and codes of practice.

9 Labeling

Each package of the cacao mass (Philippine *Tablea*) shall be securely sealed and marked clearly and indelibly with the following information:

- 9.1 Name of product: Cacao mass "Philippine *Tablea*";
- 9.2 Brand name or trade name;
- 9.3 Net content;
- 9.4 Name and address of the manufacturer, packer, and distributor;
- 9.5 Lot identification or lot code;
- 9.6 Storage condition;

- 9.7 Expiration date/ use-by-date/ consume before date;
- 9.8 Instructions for use (for retail);
- 9.9 Nutrition information;
- 9.10 Recommended Energy and Nutrient Intake (RENI);
- 9.11 Date manufactured;
- 9.12 “Product of the Philippines”;
- 9.13 Bar code (for retail) (optional);
- 9.14 Rough or fine (optional);
- 9.15 Geographical indication (GI) (optional);
- 9.16 QR Code (optional);
- 9.17 Official inspection mark (optional);
- 9.18 Fermented or unfermented (optional); and
- 9.19 Blend, single origin, or single estate (optional).

The product shall also be labeled in accordance with the appropriate sections of FDA Administrative Order No. 2014-0030 (Revised rules and regulations governing the labeling of prepackaged food products distributed in the Philippines) and Codex general standard for labeling of pre-packaged foods (CODEX STAN 1-2018).

10 Methods of analysis and sampling

Cacao mass (Philippine *Tablea*) should be sampled and analyzed based on the methods listed in Table 2.

Table 2. Methods of analysis and sampling for the Cacao mass (Philippine *Tablea*)

Specifications	Methods of Analysis
Cadmium	AOAC Official Method 999.11 Determination of Lead, Cadmium, Copper, Iron, and Zinc in Foods
Crude fat	AOAC Official Method 963.15 Fat in Cacao Products by Soxhlet Extraction Method
Lead	AOAC Official Method 999.11 Determination of Lead, Cadmium, Copper, Iron, and Zinc in Foods
Moisture	AOAC 931.04 Moisture in Cacao Products (Gravimetric method)

Specifications	Methods of Analysis
pH	AOAC Official Method 970.21 pH of Cacao Products (Potentiometric method)
Water activity	AOAC Method 978.18 Water Activity of Canned Vegetables

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Bureau of Agriculture and Fisheries Standards (BAFS) – Department of Agriculture (DA). 2019. *Philippine national standard for cacao or cocoa beans- specification and grading* (PNS/BAFPS 58:2019).

http://www.bafs.da.gov.ph/bafs_admin/admin_page/pns_file/PNS%20BAFS%2028.2019%20Cacao%20or%20cocoa%20%20specification%20and%20grading.pdf

BAFPS–DA. (2011). *Code of practice for Philippine cacao beans* (PNS/BAFPS 104:2011). [http://www.bafs.da.gov.ph/bafs_admin?admin_page/pns_file/PNS-BAFPS%20104-2011-Code%20of%20for%20Philippine%20Cacao%20Beans%20\(1\).pdf](http://www.bafs.da.gov.ph/bafs_admin?admin_page/pns_file/PNS-BAFPS%20104-2011-Code%20of%20for%20Philippine%20Cacao%20Beans%20(1).pdf)

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CAC. (2016). *Codex standard for cocoa (cacao) mass (cocoa/chocolate liquor) and cocoa cake* (CXS 87-1983, CCCPC 2016). http://www.fao.org/fao-who-codexalimentarius/sh_proxy/en/?lnk=1&url=https%253A%252F%252Fworkspace.fao.org%252Fsites%252Fcodex%252FStandards%252FCXS%2B1411983%252FCXS_141e.pdf

CAC. (1997). *Principles for the establishment and application of microbiological criteria for foods* (CAC/GL 21-1997). http://www.fao.org/fao-who-codexalimentarius/shproxy/en/?lnk=1&url=https%253A%252F%252Fworkspace.fao.org%252Fsites%252Fcodex%252FStandards%252FCXG%2B211997%252FCXG_021e.pdf

CAC. (2003). *Recommended international code of general principles of food hygiene* (CAC/RCP 1-1969, Rev. 4 2003). http://www.fao.org/fao-who-codexalimentarius/shproxy/en/?lnk=1&url=https%253A%252F%252Fworkspace.fao.org%252Fsites%252Fcodex%252FStandards%252FCXC%2B11969%252FCXC_001e.pdf

Industry Technology Development Institute (ITDI) - Department of Science and Technology (DOST). (2016). Improving the quality of solid cocoa liquor including molded cocoa nib and developing the capability of small-scale processors in the manufacture of intermediate cocoa products (Completion Report): Philippine Council for Industry, Energy and Emerging Technology Research and Development (PCIEERD)

**Department of Agriculture (DA)
Bureau of Agriculture and Fisheries Standards (BAFS)**

**Technical Working Group (TWG) for the Revision of Philippine National Standard
for Cacao mass (Philippine *Tablea*)**

Chairperson

Edwin O. Banquerigo
Department of Trade and Industry (DTI)-
Caraga

Co-Chairperson

Consul Armi Lopez- Garcia
Philippine Cacao Industry Council
Cebu Cacao Industry Development Council

Vice Chairperson

Andres M. Tuates Jr.
Department of Agriculture (DA)-
Philippine Center for Postharvest
Development and Mechanization
(PhilMech)

Vice Co-Chairperson

Jo Ann C. Sandique
Cacao Pilipinas Sensory Resources, Inc.

Members

- | | | | |
|---|---|--------|--|
| 1 | Blair L. Panong
DTI- Bohol | 6 | Valente D. Turtur
Cacao Industry Development
Association of Mindanao Inc.
(CIDAMI) |
| 2 | Ma. Dolor L. Villaseñor
Department of Science and
Technology (DOST)-
Industrial Technology Development
Institute (ITDI) | 7
8 | Rex Victor P. Puentespinas
Caerel Shane L. Orosio

Malagos Agri- Ventures
Corporation
CIDAMI |
| 3 | Vina R. Antopina
DOST- Bohol | 9 | Luisito D. Cena
Filipinas Oro De Cacao |
| 4 | Gladdys A. Pascual
Department of Health (DOH)- Food
and Drug Administration (FDA) | 10 | Josephine V. Ramos
Philippine Council for Agriculture
and Fisheries (PCAF)
Cacao Industry Development Sub-
committee |
| 5 | Dalareich P. Polot
Dalareich Chocolate House
Bohol Cacao Development Council | 11 | Patricia A. Limpe
Antonio Pueo Incorporada |

Project Manager

Karen Kristine A. Roscom
Farlash D. Pancho
Krisha Marie L. Mecija
DA-BAFS

Advisers

Vivencio R. Mamaril, Ph.D
Myer G. Mula, Ph.D
DA-BAFS



BUREAU OF AGRICULTURE AND FISHERIES STANDARDS

BPI Compound Visayas Avenue, Diliman, Quezon City 1101 Philippines
T/ (632) 928-8741 to 64 loc. 3301-3319
E-mail: info.dabafs@gmail.com
Website: www.bafs.da.gov.ph