

# **PHILIPPINE NATIONAL STANDARD**

PNS/BAFS 47:2021  
ICS 67.160.10

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## **Distilled fermented coconut sap (*Lambanog*)**



**BUREAU OF AGRICULTURE AND FISHERIES STANDARDS**  
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## Foreword

At the request of the Philippine Coconut Authority (PCA), the Bureau of Agriculture and Fisheries Standards (BAFS) undertook the amendment of the PNS for distilled fermented coconut sap (Coconut *Lambanog*) (PNS/BAFS: 47:2011) in 2021 to address food safety issues on its methanol content. A Technical Working Group (TWG) was created through Special Order (SO) No. 81, series of 2021 (Creation of TWG for the Development of PNS for Agriculture and Fishery Products, Machinery, and Equipment) and SO No. 280, series of 2021 (Addendum to SO No. 81, Series of 2021 entitled, “2021 Creation of TWGs for the Development of PNS for Agriculture and Fishery Products, Machinery, and Equipment”). The TWG was composed of representatives from government agencies, academe, and private sector. The final draft standard was presented to the relevant stakeholders during the initial and final consultations held on 27 January 2021 and 26 April 2021, respectively via online platform. The final draft PNS was subsequently finalized by the TWG and was agreed to be endorsed to the DA Secretary for approval. This standard was eventually approved by the Secretary of the Department of Agriculture in June 2021.

This PNS/BAFS edition includes the following significant changes compared to the previous PNS/BAFPS 47:2011:

1. Modification of the title from “Distilled Fermented Coconut Sap (Coconut *Lambanog*)” to “Distilled Fermented Coconut Sap (*Lambanog*)”;
2. Inclusion of the ethanol and methanol as alternative terms for ethyl alcohol and methyl alcohol, respectively in Clause 3 Terms and definition;
3. Replacement on the provision Clause 4 “Classification of Coconut *Lambanog*” to “Product description”;
4. Modification of Clause 5 Process definition;
5. Modification of the essential composition and quality factors in Clause 6;
6. Modification of the packaging in Clause 7;
7. Modification of the labeling requirements in Clause 9; and
8. Modification of methods of analysis and sampling in Clause 10.

This Standard cancel and replaces PNS/BAFPS 47:2011 which has been technically amended.

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

## 1 Scope

This standard applies to distillates from fermented sap collected from coconut inflorescence or locally known as *lambanog* intended for direct human consumption.

## 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 Food and Drug Administration- Department of Health (BFAD-DOH). (1989). Presence of methanol (Memorandum Circular [MC] No.13, series of 1989). <https://www.fda.gov.ph/wp-content/uploads/2021/05/Memorandum-Circular-No.-13-s.-1989.pdf>

Food and Drug Administration (FDA)- DOH. (2014). Revised rules and regulations governing the labeling of prepackaged food products. (FDA Administrative Order [AO] 2014-0030). <https://www.fda.gov.ph/wp-content/uploads/2020/04/Administrative-Order-No.-2014-0030-A.pdf>

Industrial Technology Development Institute- Department of Science and Technology. (ITDI-DOST). (2016). Guide manual on *lambanog* processing. [https://drive.google.com/file/d/1A\\_yoayZ1tJWbCHauEKHQTVeVyTWn1HFP/view?usp=sharing](https://drive.google.com/file/d/1A_yoayZ1tJWbCHauEKHQTVeVyTWn1HFP/view?usp=sharing)

## 3 Terms and definitions

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

### 3.1

#### **alcohol content**

alcoholic strength often expressed as percentage alcohol by volume

### 3.2

#### **coconut sap**

liquid exuding from the tapped unopened inflorescence of the coconut palm

### 3.3

#### **ethanol**

#### **ethyl alcohol**

organic compound with chemical formula  $C_2H_6O$  written also as  $CH_3CH_2OH$  or  $C_2H_5OH$ , abbreviated EtOH, derived from the natural fermentation of coconut sap, which is colorless, volatile, and flammable liquid

**3.4****methanol****methyl alcohol**

organic compound with chemical formula  $\text{CH}_4\text{O}$  or  $\text{CH}_3\text{OH}$ , which is a colorless, flammable and volatile liquid. It is a by-product in the processing of naturally fermented alcoholic beverages caused by the action of naturally occurring microorganisms, can be reduced or minimized through Good Manufacturing Practices (GMP), and not deliberately added

**3.5*****lambanog***

colorless distilled spirit obtained by distilling naturally fermented sap collected from coconut inflorescence

**3.6****naturally fermented coconut sap**

coconut sap gathered from the inflorescence of the coconut palm that has undergone natural fermentation before distillation

**3.7****proof**

statement of ethanol content such that the proof is twice the percentage of alcohol by volume

**4 Product description**

The product shall have the distinct taste and aroma of *lambanog* and should conform to the parameters set in Section 5. *Lambanog* aged in wood should also be classified under this section.

**5 Process definition**

*Lambanog* should be prepared from the distillation of naturally fermented coconut sap. The first distillate that contains methanol (*bating*) should be discarded. The second distillate is the final product.

**6 Essential composition and quality factors**

*Lambanog* should conform with the following level shown in Table 1:

**Table 1 - Physico-chemical characteristics of *lambanog***

Physico-chemical characteristics	Level
Alcohol content, expressed as ethanol, minimum	30% v/v
Methanol	Methanol content shall be in accordance with the BFAD-DOH MC No. 13, series of 1989 or according to the level defined in the amended Circular or new issuance of the FDA-DOH. Any methanol present may be

Physico-chemical characteristics	Level
	derived from the natural fermentation process and shall not be deliberately added.

## 7 Packaging

*Lambanog* should be packed in any suitable food grade glass containers such as bottles and jars.

## 8 Hygiene

The products covered by the provisions of this standard shall be prepared or processed in accordance with the ITDI-DOST Guide Manual for *Lambanog* Processing and conform with the Codex General Principles of Food Hygiene (CXC 1-1969 Rev. 4 2003) and DOH- FDA AO No. 153, series of 2004 (Revised Guidelines on Current Good Manufacturing Practices on Manufacturing, Packing, Repacking and Holding Food) or its succeeding issuances.

## 9 Labelling

The label of each package shall have the following minimum information following the FDA AO 2014-0030 (Revised Rules and Regulations Governing the Labeling of Prepackaged Food Products):

- 9.1 Name of the product: *Lambanog* - refers to pure *lambanog*;
- 9.2 Brand name or trade name;
- 9.3 Net content (volume in metric system);
- 9.4 Name and address of the manufacturer, packer, and bottler/distributor;
- 9.5 Alcohol content (proof or percent alcohol);
- 9.6 Lot identification or lot code;
- 9.7 The phrase "Product of the Philippines";
- 9.8 FDA License to Operate (LTO) Number;
- 9.9 FDA Certificate of Product Registration (CPR) Number;
- 9.10 Manufacturing year; and
- 9.11 Certification mark (optional).

## 10 Method of Analysis and Sampling

The sampling for *lambanog* should be in accordance with Codex General Guidelines on Sampling (CXS 50-2004).

*Lambanog* should be analyzed based on the method listed in Table 2.

**Table 2 - Method of analysis**

Specification	Method of Analysis
Alcohol content	AOAC 972.11 (2005) Alcohol by % volume(v/v) (ethanol and methanol) in distilled liquors – Gas Chromatography Method

The methods of analysis for methanol and ethanol should be in accordance with AOAC 972.11, 18<sup>th</sup> edition, 2005 or any updated version thereof.

## Bibliography

AOAC Official Method 958.04. (1998). Methanol in distilled liquors – chromotropic acid colorimetric method (AOAC Official Method of Analysis, Code No. 26.1.34). <http://www.eoma.aoc.org/methods/info.asp?ID=760>

AOAC Official Method 972.11. (1998). Methanol in distilled liquors–gas chromatographic method (AOAC Official Method of Analysis, Code No. 26.1.36). <http://www.eoma.aoc.org/methods/info.asp?ID=760>

Codex Alimentarius Commission (CAC). (2004). General guidelines on sampling (CAC/GL 50-2004). [http://www.fao.org/fao-who-codexalimentarius/sh-proxy/en/?lnk=1&url=https%253A%252F%252Fworkspace.fao.org%252Fsit%252Fcodex%252FStandards%252FCXG%2B50-2004%252FCXG\\_050e.pdf](http://www.fao.org/fao-who-codexalimentarius/sh-proxy/en/?lnk=1&url=https%253A%252F%252Fworkspace.fao.org%252Fsit%252Fcodex%252FStandards%252FCXG%2B50-2004%252FCXG_050e.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](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)

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

**Technical Working Group (TWG) for the Amendment of Philippine National  
Standard for Distilled fermented coconut sap (*Lambanog*)**

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