

PHILIPPINE NATIONAL STANDARD

PNS/BAFPS 01:2003
ICS 67.140.20

Green coffee beans – Specification



BUREAU OF PRODUCT STANDARDS

Foreword

This Philippine National Standard for Green Coffee Beans, PNS 54:2003 was prepared by the Technical Committee and Sub-Committees of the Bureau of Agriculture and Fisheries Product Standards (BAFPS). This standard was approved for adoption as Philippine National Standard by the Bureau of Product Standards.

This standard cancels and replaces PNS 54:1989.

This standard was revised upon the request of the Task Force on the Rehabilitation of the Coffee Industry in the country to update the current practices in the industry.

This revision of PNS for Green Coffee Beans was undertaken by the Technical Committee and Sub-Committees of the Bureau of Agriculture and Fisheries Product Standards (BAFPS) organized through the Special Order No. 411, series of 2001, after several technical reviews and public consultations held in the three major islands of the country.

Modifications were made on the moisture content, inclusion of cupping taste test for coffee beans, and the general requirement that coffee beans shall be free from musty, moldy and other foreign odor and taste.

Green coffee beans – Specifications

1 Scope

This standard specifies the requirements for various grades of dried and processed green coffee beans belonging to four botanical species namely: *Coffea arabica* Linn, *Coffea robusta* Linden (*Coffea canephora* Pierre ex Froehner), *Coffea liberica* Bull ex Hiern and *Coffea excelsa* Chev.

2 References

The titles of the standards publications referred to in this standard are listed on the inside back cover.

3 Definitions

For the purpose of this standard, the following definitions apply:

3.1 General**3.1.1****coffee**

general term for the fruits and seeds of plants of the genus *Coffea*, generally cultivated species, as well as products from these fruits and seeds in different stages of processing and use, intended for consumption

3.1.2**coffea**

a shrub or tree belonging to the family *Rubiaceae* of the botanical order *Rubiales*

3.1.3**coffee bean****green coffee**

commercial term designating the dried seed of the coffee plant, disengaged from their external envelope (exocarp, mesocarp and endocarp)

3.1.4**dry process**

treatment of coffee cherries consisting of drying to give husk coffee, followed by mechanical removal of the dried pericarp to produce green coffee

3.1.5**wet process**

treatment of coffee cherries, consisting of mechanical removal of the exocarp in the presence of water, removal of all the mesocarp by fermentation or other methods, and washing followed by drying to expose parchment which is subsequently removed from the seed/bean to produce green coffee

3.2
defects

3.2.1

black bean

coffee bean of which half or more than one-half of the external bean is black

3.2.2

infested bean

coffee bean with one or more holes caused by insects

3.2.3

broken bean

fragment of coffee of which the size is equal to or less than three-fourths of the whole bean

3.2.4

immature bean

unripe coffee bean of greenish or grayish color often with a wrinkled surface, also white spongy bean

3.2.5

husk bean

dried coffee cherry

3.2.6

husk fragment

fragment of husk (pericarp) with or without silver-skin and parchment

3.2.7

fermented/sour bean

coffee bean of which more than one-half of the surface is dark brown or chestnut brown in color

3.2.8

admixture

sound bean of another botanical variety other than the specified variety agreed upon by the buyer and the seller

3.2.9

foreign matter

corn, rice, soya, stick, piece of hard earth, stones, nails or anything other than coffee

4 Method of preparation

Green coffee beans may be prepared either by wet or dry process.

5 General requirements

Green coffee beans shall conform to the following requirements:

- 5.1 The moisture content of green coffee beans shall not exceed 13%.
- 5.2 Green coffee beans shall be free from musty, moldy, other foreign odor and taste.
- 5.3 Green coffee beans shall be fairly uniform in size where not more than 10% shall pass through sieve no. 12 round with apertures having nominal diameter of 4.75 mm as specified in PNS ISO 4150.
- 5.4 Green coffee beans shall be of homogeneous species.
- 5.5 Green coffee beans shall be free from live insects.

6 Grades

6.1 Grading of green coffee beans shall be based on the percentage of defects contained in a 300-gram sample as shown in Table 1.

Table 1 - Grade for green coffee beans

Grade	Species			
	Total defects of 300-g sample % by mass, max.			
	Arabica	Robusta	Liberica	Excelsa
1	7	10	10	10
2	15	15	15	15
3	20	25	25	25
4	-	40	-	-

6.2 The maximum percentage defect per grade presented in Table 2 shall be applied. .

Table 2 - Breakdown of defects per grade specifying maximum percentage per defect

Type of defect	Grade %			
	1	2	3	4
Black beans	4	6	9	15
Infested beans	4	5	7	8
Broken beans	3	5	7	10
Immature beans	2	3	5	8
Husk beans	1	1.5	2	3
Husks fragment	1	1.5	2	3
Fermented/sour beans	1	1.5	2	3
Foreign matter	1	1	1	2
Admixture	0.5	0.5	1	2

7 Size classification

Green coffee beans when classified shall conform to Table 3.

8 Sampling

Sampling of green coffee beans for test shall be in accordance with PNS ISO 4072.

9 Method of test

Moisture content shall be tested in accordance with PNS ISO 1446 or with the use of moisture tester calibrated by any authorized government agency.

10 Packing

10.1 Green coffee beans shall be packed in sacks made of natural fibers such as jute kenaf, sisal, hemp etc.

10.2 Each sack shall contain 60 kg net, or as otherwise specified by the buyer.

11 Marking

Each sack of green coffee beans shall be marked with the following information:

- a) Name of product;
- b) Species;
- c) Grade;
- d) Product of the Philippines;
- e) Net mass; and
- f) Name and address of producer/trader/exporter or Country Code/Exporter's Coder/Parcel No.

Table 3 - Size classification for green coffee beans

Class	SPECIES				
	Arabica	Robusta		Liberica	Excelsa
Large	Beans retained in sieves of 7.93 mm openings; numbering less than 175 beans per 25 g	<u>Dry Processed</u> Beans retained by 5.6 mm x 5.6 mm (3 ½ mesh) screen with maximum of 1% (mass/mass) passing through	<u>Wet Processed</u> Beans retained by a screen having round holes of 7.5 mm diameter with a maximum of 2.5% (mass/mass) passing through	Beans retained in sieves of 9.52 mm openings; numbering less than 100 beans per 25 g	Beans retained in sieves of 7.93 mm openings; numbering less than 125 beans per 25 g
Medium	Beans retained in sieves of 6.73 mm openings; numbering 175-200 beans per 25 g	-	Beans passing through a screen having round holes of 7.5 mm diameter and retained by a screen having round holes of 6.5 mm diameter with a maximum of 2.5% (mass/mass) passing through	Beans retained in sieves of 7.93 mm openings; numbering 110-145 beans per 25 g	Beans retained in sieves of 7.93 mm openings; numbering 125-160 beans per 25 g
Small	Beans retained in sieves of 6.35 mm openings; numbering 201-250 beans per 25 g	-	Beans passing through a screen having round holes of 6.5 mm diameter and retained by a screen having round holes of 5.5 mm diameter of 2.5% (mass/mass) passing through	Beans retained in sieves of 6.7 mm openings; numbering 146-200 beans per 25 g	Beans retained in sieves of 6.35 mm openings; numbering 161-200 beans per 25 g
Mixed	A mixture of any 2 or more classes none is smaller than class small	-	-	A mixture of any 2 or more classes none is smaller than class small	A mixture of any 2 or more classes; none is smaller than class small

References

PNS/BAFPS 01:2003

PNS ISO 1446:2003, Green coffee – Determination of waste content (Basic reference method)

PNS ISO 4072:2003, Green coffee bags – Sampling

PNS ISO 4150:2003, Green coffee – Size analysis – Manual sieving

B P S

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