

APPENDIX 4.

COFFEE PARCHMENT STANDARDS, FACTORY STANDARDS AND EXPORT GRADES, 2016

A4.1. PARCHMENT STANDARDS

A4.1.1 Introduction

Parchment Arabica Coffee is defined as dry Arabica coffee beans wrapped in the endocarp. Coffee at the parchment stage of the processing chain is the most widely traded within the country. While it is primarily classified according to colour, quantitative measurements are possible, such as moisture content and number of defects.

The objective of parchment standards is to ensure that growers who take care in the preparation of their coffee have a basis to demand the highest price available on the day of sale. It also assists the buyer, factory manager or roadside trader, in price negotiation and should discourage habitual presentation of poor quality coffee on the market.

A4.1.2 Standards

PNG Standard 1626 : 2015 provides for three (3) classes of Arabica parchment as described in Table A4.1, classified on the basis of appearance and defect.

Table A4.1 Parchment Standards for Arabica Parchment

Parchment Class	Description	Maximum Defect allowed (per kg)
Class 1	Clean, sound, pale, even coloured Arabica parchment which is substantially free of visible defects, has no off odours and is capable of yielding either A or B grade green bean	10
Class 2	Clean, sound, pale coloured Arabica parchment, which has some visible defects and is capable of yielding Y grade green bean.	70
Class 3	Arabica parchment which does not have an excessive amount of visible defects and is capable of yielding Y2 grade green bean	150

A4.1.3 Definitions relating to parchment standards

a) Defects

All defects would have the same value and are defined as follows:

“Coffee parchment beans which are not normal in physical appearance. Beans damaged by nature or insects or during processing”.

The buyer should take as many samples as necessary and must calculate the defects on a per kg equivalence. **In these calculations all defects have a value of one (1).**

b) Foreign matter

Foreign matter is defined as: *Any substance not derived from the coffee cherry.*

Factories should reject all parchment with foreign matter. Any parchment containing foreign matter is immediately downgraded to Class 3. Class 3 also allows parchment that is substantially free from foreign matter.

A4.1.4 Moisture

Parchment is classified on the basis of appearance and number of defects. Moisture is treated separately and will have a significant impact on the price paid to the smallholder.

Moisture of the coffee is generally determined using the standard teeth and rubbing method. Managers should use their discretion in allocating an adjustment for moisture, since many factories prefer to purchase parchment at slightly higher moisture contents.

Table A4.2: Moisture content of parchment

Moisture	Measure
9-11% 'Machine Coffee'	Very hard. No teeth marks.
11-15%	Hard only slight marks with teeth.
15-20%	Soft black appearance. Easy to mark with teeth.
20-30%	Very soft black. Crushes with teeth.

The appropriate price adjustments should therefore be used and the appropriate level of price discounts should be applied.

Plastic laminated posters setting out the Classes of Parchment should be displayed near all buying points and in all factories.

The prices for all 3 Classes of parchment should be clearly displayed at buying points and at factory door.

A4.2. STANDARDS - EXPORT GRADES

A4.2.1 Green bean grades and standards

PNG Standard 1626 : 2015 provides specifications for Green Coffee in Papua New Guinea (PNG): standard parameters and criteria for liquor and physical quality: criteria for sampling, analysis, and determination of grades: specification for marking and packaging. The reader should refer to PNG Standard 1626 : 2015 for full details.

PNG Standard 1626 : 2015 provides for five (5) grade designations : A, B, Y, Y2 and Y3. Bean size of A, B and Y grades may be further classified with the use of a suffix. Details are shown here in Table A4.3

A4.2.2 Export standards and packing for export

Licensed factories are required to grade their coffee to the standard ready for export. PNG Standard 1626 : 2015 sets out clear guidelines for packing for export whether in bags or in bulk containers. The guidelines include details on bag labelling.

A4.2.2.1 Packing in Bags

- Green coffee for export shall be packed in clean, sound, new non-mineral oil, jute bags free from tears, any sign of leakage or any objectionable odour. Bags for export coffee shall be between 1020 and 1070mm long and between 535 and 610mm wide.
- Where coffee is packed in jute bags with water-resistant and hermetically sealable liners, random sampling shall be undertaken by authorized CIC Provincial Inspectors prior to packing and sealing the liner within clean, sound, new, non-mineral oil jute bags free from tears, any sign of leakage or any objectionable odour. Export and Quality assurance and certification must be undertaken and cleared in designated ports prior to export.
- The net weight of a bag of green coffee for export shall be 60 Kg at time of shipment, except for Y3 which may weigh less.

A4.2.2.2 Export Bag Labelling

Bags for export of green coffee shall bear the following markings in black indelible food-grade ink in letters not less than 50mm high and 6mm thick. The marks shall be placed in separate lines, centrally placed below the mouth or closure in the following order:

- a) The words "Papua New Guinea" or the initial "PNG",
- b) "Washed Raw Robusta Coffee" according to contents;
- c) The words "Clean, sound and new" denoting the condition of the bag;
- d) On the reverse side of the bag, the following marks shall be displayed in separate lines centrally placed in the following order;
 - i) A mark rectangle placed breadth wise below the mouth or closure of the bag and printed in black indelible food-grade ink so as to obscure any other markings required by this section. The rectangle to be divided into three compartments;
 - ii) Indelibly marked in black food-grade ink in figures not less than 50mm high the following shall appear within the three compartments;
 - iii) In the left-hand compartment the number 166 being the ICO identification mark for PNG;
 - iv) In the centre compartment a number up to four digits long allocated by the CIC to identify the exporter of the coffee;
 - v) In the right-hand compartment a number up to five digits long being the exporter's serial number for the particular lot of coffee.

Note: There are 10 additional instructions re labeling; the reader should refer to PNG Standard 1626 : 2015

A4.2.2.3 Packing in Bulk Containers

1. The green coffee shall be stuffed in a 20 foot Standard Ocean-Going Container. The bulk containers shall be clean, sound, dry, water and air tight, and must be free of any objectionable odour.
2. The containers shall be lined with clean and dry polythene or polypropylene liners that are free from tears, any signs of leakage and any objectionable odour.
3. The maximum net weight of green coffee in bulk containers shall not exceed 21,600 kg or 360 x 60kg green coffee bags equivalent. All bulk weights must be indicated clearly on every export document.
4. When bulking is completed, authorized CIC Inspectors shall issue an Inspection Certificate and may put its seal on the bulked container. The sealing is final and shall not be tampered with until it reaches the port of destination.
5. Unless otherwise stated, all bulk coffees should be shipped on FCL/FCL basis.

A4.2.3 Drawing of Samples for Analysis

PNG Standard 1626 : 2015 specifies that sampling for any purpose shall be carried out according to the provisions of ISO 4072 – Green Coffee in Bags – Sampling. Refer to PNG Standard 1626 : 2015 For details

A4.2.4 Moisture Content

PNG Standard 1626 : 2015 specifies that Green Coffee for export shall contain water at not less than 8% nor more than 12.5% of total mass. Determination may be made according to ISO 6673 or by another method agreed upon by the parties concerned.

A4.2.5 Olifactory and Visual Examinations

- 1) Examinations and Determination shall be made according to the provisions of ISO 4149
- 2) Allocation of Grade to sample being examined shall be made according to the specification Table A4.3 and A4.4

A4.2.6 Sensory Analysis

- 1) Samples for sensory analysis shall be prepared according to the provisions of ISO6668
- 2) Allocation of Grade to sample shall be made according to the specifications set out in Table A4.3 and A4.4

A4.2.6 Size Analysis

Size analysis shall be carried out according to the provisions of ISO 4150 and made according to the specifications set out in Table A4.3

Table A4.3 : PNG Green Coffee Specifications for Arabica Coffee

Grade	Cup Quality	Maximum Defect allowed (Equivalent per kg)	Raw Bean Colour	Odour	Bean Size																										
A	Full, reasonably balanced, uniform, clean, cup; well pronounced body and acidity; rich and distinct fragrance and aroma.	10	Bluish Green	Fresh and clean, no off odours allowed	Displayed as a Suffix. Where a specific screen size is designated the coffee must be uniform in size above designated screen size. No suffix means the coffee is mixed size.																										
B	Regular, uniform clean cup; medium to high acidity and pronounced body; rich fragrance and aroma.	30	Even, green to bluish green																												
Y	May lack some uniformity in the cup; good acidity and body; some fruitiness/ wineyness; good fragrance and aroma.	70	Pale green to green																												
Y2	Irregular cup profile; fair acidity and body; no foul or foreign flavour.	150	Mixed light green to green			No foul or foreign odours.	Mixed																								
Y3	No foul or foreign flavour.	30% defects excluding good nipped beans. No foreign matter. Must be fit for human consumption.	Mixed			No Foul or foreign odours.	Mixed																								
						<table border="1"> <thead> <tr> <th>Screen No.</th> <th>Screen Diameter (mm)</th> <th>ISO norm</th> </tr> </thead> <tbody> <tr> <td>20</td> <td>7.94</td> <td>8.00</td> </tr> <tr> <td>19</td> <td>7.54</td> <td>7.50</td> </tr> <tr> <td>18</td> <td>7.14</td> <td>7.10</td> </tr> <tr> <td>17</td> <td>6.75</td> <td>6.70</td> </tr> <tr> <td>16</td> <td>6.35</td> <td>6.30</td> </tr> <tr> <td>15</td> <td>5.95</td> <td>6.00</td> </tr> <tr> <td>PB</td> <td>4.37 to 5.55 (single bean/ round shape)</td> <td>4.40 to 5.60</td> </tr> </tbody> </table>	Screen No.	Screen Diameter (mm)	ISO norm	20	7.94	8.00	19	7.54	7.50	18	7.14	7.10	17	6.75	6.70	16	6.35	6.30	15	5.95	6.00	PB	4.37 to 5.55 (single bean/ round shape)	4.40 to 5.60	
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Table A4.4: Defect schedule

Description of Defect	Number of Defect/ Foreign matter	Defect Equivalent
Large Stone (1 cm diameter)	1	2
Medium Stone (about 5 mm diameter)	1	1
Small Stone (less than 5 mm diameter)	3	1
Large Stick (3 cm length)	1	2
Medium Stick (2 cm length)	1	1
Small Stick (1 cm length)	3	1
Pod	1	1
Full Black	1	1
Partly Black	5	1
Full Sour	1	1
Partly Sour	5	1
Shells	5	1
Pulper-cut/Brokens	5	1
Floaters	5	1
White/Old	5	1
Parchment	2	1
Husk/Hull	2	1
Immature	5	1
Water Damage	5	1

NOTE: Any other foreign matter and defect not included in this schedule may be assessed by the authority using this standard or by an arbitration panel.