



Consejo Internacional del Café  
122º período de sesiones  
17 – 21 septiembre 2018  
Londres, Reino Unido

**Normas nacionales de calidad**

**Antecedentes**

1. La Secretaría está comprometida a publicar informes periódicos sobre normas nacionales de calidad aplicables al café en países Miembros, incluida información sobre sistemas de clasificación y certificación. Con ese fin, se pidió a los Miembros, en julio de 2018, que actualizaran datos de sus normas nacionales de calidad del café (véase el documento [ED-2271/18](#)).

2. Al 8 de agosto de 2018, se habían recibido respuestas a la solicitud de la OIC de Angola, Camerún, Congo (República Democrática del), Costa Rica, Côte d'Ivoire, Ghana, Honduras, Nicaragua, Noruega, Papua Nueva Guinea, Rwanda, Sierra Leona, Togo, la UE-Italia y Uganda. Además, se había recibido información de un país no miembro, China. Se habían recibido respuestas a una solicitud anterior del Brasil, Colombia, Cuba, Ecuador, los Estados Unidos de América, Gabón, Haití, Indonesia, México, la UE-Alemania y la UE-República Checa. En este informe se consolida toda la información recibida y se proporciona una base de datos de normas nacionales de calidad del café de cada país.

**Medidas que se solicitan**

Se pide al Consejo que examine este documento.

## NORMAS NACIONALES DE CALIDAD

La información que figura en este documento está basada en las respuestas recibidas de los Miembros al documento [ED-2271/18](#), en el que se solicitaba información acerca de normas nacionales de calidad del café, incluidos sistemas de clasificación y certificación. Hasta la fecha, se recibieron respuestas acerca de normas de calidad de los siguientes países exportadores: Angola, Brasil\*, Camerún, Colombia\*, Congo (República Democrática del), Costa Rica, Côte d'Ivoire, Cuba\*, Ecuador\*, Gabón\*, Ghana, Haití\*, Honduras, Indonesia\*, México\*, Nicaragua, Papua Nueva Guinea, Rwanda, Sierra Leona, Togo y Uganda, y de cinco<sup>1</sup> países importadores: los Estados Unidos de América\*, UE-Alemania\*, UE-Italia, UE-República Checa\* y Noruega. Además, se recibió información de China (país no miembro).

El propósito de este documento es recopilar información acerca de las distintas legislaciones y reglamentaciones relativas a normas nacionales de calidad de los países Miembros. Siempre que fue posible se trató de resumir, o explicar de modo sucinto, la reglamentación establecida en el país de que se trate. No obstante, en algunos casos solo se ofrecen el código y la descripción respectiva de la legislación pertinente. Este documento se centra principalmente en el café verde destinado a exportación, pero también se ofrece información sobre normas relativas al café tostado y molido, y al café soluble, cuando está disponible.

Según la Guía del Exportador de Café del Centro de Comercio Internacional, el café se clasifica habitualmente basándose en uno o más de los siguientes criterios:

- Altitud y región
- Tipo botánico
- Preparación (elaboración por vía húmeda o seca; lavado o natural)
- Tamaño, forma o color del grano
- Número de defectos
- Aspecto tostado y calidad de la bebida (sabor, características, limpieza)
- Densidad del grano

\* Como se informó en el documento [PM-29/13](#), septiembre 2013.

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<sup>1</sup> Japón respondió que se aplicaban normas de calidad nacionales e internacionales al café, pero no dio detalles de dichas normas.

El criterio más común que dieron los Miembros es el sistema de clasificación según el tamaño del grano. Por consiguiente, y siempre que fue posible, se centró la atención en dar las definiciones de distintos tipos de café para cada país según el tamaño. En la mayor parte de los países, el tamaño del grano se determina pasando el café por una criba perforada, que retiene los granos de determinado tamaño y deja pasar los granos más pequeños. El tamaño de la criba se da en términos de 1/64 de una pulgada: si el tamaño de la criba es 10, es 10/64 de una pulgada; si el tamaño de la criba es 12, será 12/64 de una pulgada y así sucesivamente. Los tamaños de las cribas se dan también a continuación en unidades métricas.

| Número de criba         | 10   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   |
|-------------------------|------|------|------|------|------|------|------|------|------|------|
| Dimensiones ISO (en mm) | 4,00 | 4,75 | 5,00 | 5,60 | 6,00 | 6,30 | 6,70 | 7,10 | 7,50 | 8,00 |

Fuente: *Guía del Exportador de Café*

Guatemala y Yemen habían informado anteriormente a la Secretaría de que no aplicaban todavía normas de calidad al café (véase el documento [PM-29/13](#)).

Las normas de calidad que aplican los Miembros al café pueden dividirse en tres categorías:

- a) Nacional: Brasil\*, Camerún, Colombia\*, Congo (República Democrática del), Côte d'Ivoire, Cuba\*, Ecuador\*, Estados Unidos de América\*, Gabón\*, Ghana, Honduras, Indonesia\*, Italia, México\*, Nicaragua, Papua Nueva Guinea, República Checa\*, Rwanda y Sierra Leona
- b) Internacional: China y Togo
- c) Nacional e internacional: Alemania\*, Angola, Costa Rica, Haití\*, Japón, Noruega y Uganda

El Cuadro 1 resume los criterios que usan los países con respecto a normas de calidad aplicables al café verde e indica el número de grados que resulta de la evaluación de dichos criterios. Además, el Cuadro 2 indica, con respecto a cada país, si informó de que hubiese normas sociales/ambientales o normas nacionales de calidad aplicables al café tostado y molido o al café soluble. La columna final del Cuadro 2 indica si los países informaron de obstáculos comerciales debidos a disposiciones en materia de normas de calidad.

El Anexo (solo en inglés) indica con detalle cada una de las normas nacionales de calidad del café, tal como las comunicó cada Miembro exportador e importador y también un país no miembro (China).

\* Según se informó en el documento [PM-29/13](#), septiembre 2013.

*El contenido de este documento se basa en información ofrecida por los Miembros y de dominio público. Se hizo un esfuerzo razonable para asegurar su exactitud en el momento de la publicación. No obstante, la OIC no garantiza la exactitud de esta información y no puede aceptar responsabilidad por los errores, inexactitudes u omisiones que pueda haber en este documento.*

**Cuadro 1: Criterios usados con respecto a normas de calidad del café verde, por país**

|                      | Tipo               |                | Proceso/<br>beneficio<br>húmedo/<br>seco | Grano  |       |       |          |         |      | Número<br>de<br>defectos | Calidad/<br>sabor en<br>taza | Sensorial/<br>aroma,<br>tostado, sabor | Número de<br>grados |
|----------------------|--------------------|----------------|--|--------|-------|-------|----------|---------|------|--------------------------|------------------------------|--|---------------------|
|                      | Altitud/<br>región | Arab./<br>Rob. |  | Tamaño | Forma | Color | Densidad | Humedad | Olor |                          |                              |  |                     |
| Angola               | ✓                  | ✓              |  | ✓      | ✓     | ✓     |          |         |      | ✓                        |                              | ✓                                      | 8                   |
| Brasil*              |                    | ✓              |  | ✓      | ✓     |       |          | ✓       |      | ✓                        |                              | ✓                                      |                     |
| Camerún              | ✓                  |                | ✓  | ✓      | ✓     | ✓     | ✓        | ✓       |      | ✓                        |                              | ✓                                      |                     |
| Colombia*            |                    |                |  | ✓      |       | ✓     |          | ✓       | ✓    | ✓                        | ✓                            |  | 5                   |
| Congo, Rep. Dem. del |                    | ✓              |  | ✓      |       |       |          | ✓       |      |                          |                              | ✓                                      |                     |
| Costa Rica           | ✓                  |                |  | ✓      | ✓     | ✓     | ✓        | ✓       | ✓    | ✓                        |                              | ✓                                      |                     |
| Côte D'Ivoire        |                    |                |  | ✓      | ✓     | ✓     | ✓        | ✓       | ✓    | ✓                        |                              | ✓                                      | 5                   |
| Ecuador*             |                    |                |  |        |       |       |          |         |      | ✓                        |                              | ✓                                      |                     |
| Gabón*               |                    |                |  | ✓      |       |       |          |         |      | ✓                        |                              |  | 4                   |
| Ghana                |                    |                |  |        |       |       |          |         |      | ✓                        |                              |  | 4                   |
| Haití*               |                    |                |  | ✓      |       |       |          |         |      | ✓                        |                              |  | 4                   |
| Honduras             | ✓                  |                | ✓  | ✓      | ✓     | ✓     | ✓        | ✓       | ✓    | ✓                        |                              | ✓                                      |                     |
| Indonesia*           |                    | ✓              |  |        |       |       |          |         |      | ✓                        |                              |  |                     |
| México*              | ✓                  |                |  | ✓      |       | ✓     |          |         |      | ✓                        |                              |  | 3                   |
| Nicaragua            | ✓                  | ✓              | ✓  | ✓      | ✓     | ✓     | ✓        | ✓       | ✓    | ✓                        | ✓                            | ✓                                      | Arab: 17, Rob: 3    |
| Papua Nueva Guinea   |                    | ✓              |  | ✓      |       | ✓     |          |         |      | ✓                        | ✓                            | ✓                                      | Arab: 5, Rob: 3     |
| Rwanda               |                    | ✓              | ✓  | ✓      |       |       |          | ✓       |      | ✓                        | ✓                            | ✓                                      | Arab: 9, Rob: 2     |
| Sierra Leona         |                    |                |  | ✓      | ✓     | ✓     | ✓        | ✓       |      | ✓                        |                              |  |                     |
| Togo                 |                    |                |  | ✓      |       | ✓     |          | ✓       |      | ✓                        |                              |  | 4                   |
| Uganda               | ✓                  | ✓              | ✓  | ✓      |       |       |          | ✓       |      | ✓                        |                              |  | Arab: 19, Rob: 14   |
| Italia               |                    | ✓              |  |        |       |       |          | ✓       |      | ✓                        |                              |  |                     |
| EE UU*               |                    |                |  | ✓      | ✓     | ✓     |          |         |      | ✓                        | ✓                            |  |                     |
| China                |                    |                |  | ✓      |       |       |          | ✓       |      | ✓                        | ✓                            | ✓                                      | 3                   |

\* Según se informó en el documento [PM-29/13](#), septiembre 2013.

**Cuadro 2: Normas sociales, ambientales o de calidad y obstáculos resultantes de dichas normas**

|                    | <b>Normas sociales/ambientales</b> | <b>Café tostado y molido</b> | <b>Café soluble</b> | <b>Obstáculos comerciales comunicados</b> |
|--------------------|------------------------------------|------------------------------|---------------------|---|
| Angola             | Ambientales                        |                              |                     |   |
| Brasil*            |                                    | Sí                           |                     |   |
| Camerún            | Ninguna                            | Internacional                | Ninguno             |   |
| Colombia*          |                                    |                              |                     |   |
| Costa Rica         |                                    | Sí                           |                     |   |
| Côte D'Ivoire      | En preparación                     | No                           | No                  |   |
| Cuba*              | Sí                                 | No                           | No                  |   |
| Ecuador*           |                                    | Sí                           |                     |   |
| Ghana              | Ninguna                            | Ninguno                      | Ninguno             |   |
| México*            |                                    | Sí                           | Sí                  |   |
| Nicaragua          | Ambientales                        |                              |                     |   |
| Papua Nueva Guinea | Ninguna                            | Ninguno                      | Ninguno             |   |
| Rwanda             | Ambientales                        | Sí                           | Sí                  |   |
| Sierra Leona       |                                    | Ninguno                      | Ninguno             | Sí  |
| Togo               | Ambientales                        | Ninguno                      | Ninguno             | Sí  |
| Uganda             |                                    | Internacional                |                     |   |
| Alemania* (UE)     |                                    | Sí                           | Sí                  |   |
| Noruega            |                                    | Sí                           |                     |   |
| EE UU*             |                                    |                              |                     |   |

Notas: un espacio en blanco significa que no se dio información o no estaba disponible.

\* Según se informó en el documento [PM-29/13](#), septiembre 2013.

## ANNEX

### COMPILATION ON NATIONAL QUALITY STANDARDS

#### I. EXPORTING COUNTRIES

##### ANGOLA

The national body in charge of regulating quality standards for coffee is the Ministry of Agriculture and Forestry (*Ministério da Agricultura e Florestas*). The standards are embodied in the regulation on coffee for export, which was adopted under Joint Executive Decree No 27/92 of 5 June 1992 of the Secretariat of State for Coffee and the Ministry of Trade, and Ministerial Order No 17.330/59 of 31 August.

Green coffee is graded according to region, botanical variety, size and shape, bean color and bean moisture, as follows:

- (a) Region: In terms of geographical origin, the following producing regions have been recognized: Cabinda, Ambriz, Cazengo and Amboim.
- (b) Botanical origin: Angolan coffees are classified as:
  - Arabica – when derived from *Coffea arabica L.*
  - Robusta – when derived from *Coffea canephora Pierre*
- (c) Bean size:
  - Grado – when 90% (by weight) of beans are retained by screen size 17 (11½ for peaberries).
  - Médio – when 90% (by weight) of beans pass through screen size 17 (11½ for peaberries) and are retained by screen size 15 (10 for peaberries).
  - Miúdo – when more than 50% (by weight) of beans pass through screen size 15 (10 for peaberries).
  - Corrente – when the coffee does not fall within any of the above classifications.

In terms of bean shape, a coffee batch will be given the 'peaberry' designation only if it has 90% by weight of 'peaberry' beans.

- (d) Color: homogenous or non-homogenous.
- (e) Aroma: normal, strange or intolerable.
- (f) Roasted: good, regular or bad.
- (g) Flavour: good, regular or bad.

Arabica coffee of good flavour will be further classified as: mild or ordinary.

In terms of defects, a 600g sample is used to classify coffee into the following types:

|         |                 |
|---------|-----------------|
| Type 1  | No defects      |
| Type 2  | 1-4 defects     |
| Type 3  | 5-9 defects     |
| Type 4  | 10-19 defects   |
| Type 5  | 20-39 defects   |
| Type 6  | 40-73 defects   |
| Type 7  | 74-110 defects  |
| Type 8  | 111-167 defects |
| Type 9  | 168-240 defects |
| Type 10 | 241-67 defects  |
| Type 11 | 368-480 defects |

For type classification purposes, the following table of equivalence is used:

| Number of defects         |        |
|---------------------------|--------|
| <b>(I) Impurities</b>     |        |
| 1 Skin                    | 1 to 3 |
| 1 Stone or earth          | 1 to 3 |
| 1 Foreign body            | 1 to 3 |
| 1 to 3 hulls              | 1      |
| 1 Cocoa/chocolate finish  | 1      |
| 3 Beans with parchment    | 1      |
| <b>(II) Imperfections</b> |        |
| 1 Black beans             | 1      |
| 2 Fermented beans         | 1      |
| 6 Imperfect beans         | 1      |

The final grading of coffee based on the above criteria is presented in Table 3.

Table 3: Angola – coffee qualities

| Grade                            | Bean size   | Type             | Color      | Aroma  | Roast           | Flavour | Max. weight in sample |            |              |
|----------------------------------|---|------------------|------------|--------|-----------------|---------|-----------------------|------------|--------------|
|                                  |   |                  |            |        |                 |         | Flat beans            | Impurities | Hollow beans |
| (I) Extra                        | Grado or médio  | 1 to 4 or better | Homogenous | Normal | Good            | Good    | 6g                    | 0.5g       | 1g           |
| (II) Superior                    | Grado or médio  | 6 or better      | Homogenous | Normal | Good            | Good    | 12g                   | 1g         | 2g           |
| (III) 1 <sup>st</sup> quality    | Grado, médio or corrente (less than 10% of beans with screen size less than 14)   | 7 or better      |            | Normal | Regular or good | Good    | 21g                   | 1.5g       | 3g           |
| (IV) 2 <sup>nd</sup> quality AA  |   | 8 or better      |            | Normal | Regular or good | Good    | 24g                   | 2 g        | 6g           |
| (V) 2 <sup>nd</sup> quality BB   |   | 9 or better      |            | Normal | Regular or good | Good    | 30g                   | 2.5g       | 12g          |
| (VI) 3 <sup>rd</sup> quality CC  |   | 10 or better     |            |        |                 |         |                       | 3g         | 18g          |
| (VII) 3 <sup>rd</sup> quality DD |   | 11 or better     |            |        |                 |         |                       | 3.5g       | 24g          |
| (VIII) Coffee residues           | Coffee which exceeds the maximum number of defects, impurities or hollow beans allowed for 3 <sup>rd</sup> quality DD, or which has an intolerable aroma, a bad taste or colors which are not normal for the product. |                  |            |        |                 |         |                       |            |              |

**BRAZIL\***

Coffee standards in Brazil are predominantly regulated by the Ministry of Agriculture (MAPA), which issues *Instruções Normativas* on aspects of agricultural quality and classification. Coffee is also affected by the *Agência Nacional de Vigilância Sanitária (ANVISA)*, an autonomous agency in the Ministry of Health, which issues regulations through its Executive Board regarding aspects of food safety and health.

Currently, the classification of raw green coffee beans is directly regulated by *Instrução Normativa Nº. 8/2003*, by the Ministry of Agriculture. Coffee is categorized initially into *Coffea arabica* and *Coffea canephora*, and subsequently into subcategories of *chato* (flat) and *moca* (peaberry), according to the size and shape of the bean (see table below). The regulation also provides details of qualitative classifications of Arabica and Robusta according to their aromas and flavours, as well as limits for moisture content, defects and impurities.

| Denomination          | Screen size   |
|-----------------------|---------------|
| Chato graúdo          | 17, 18 and 19 |
| Chato médio           | 15 and 16     |
| Chato miúdo           | 14 and under  |
| Moca graúdo           | 11, 12 and 13 |
| Moca médio            | 10            |
| Moca miúdo (moquinha) | 9 and under   |

In May 2010, the Ministry of Agriculture issued a regulation regarding the quality standards of roasted and ground coffee, *Instrução Normativa Nº. 16/2010*. However, this was initially deferred by two years by *Instrução Normativa Nº. 6/2011*, and finally repealed in February 2013 by *Instrução Normativa Nº. 7/2013*.

Finally, coffee must also comply with Ministry of Health Resolution Nº. 277 of 2005, which gives definitions and health requirements for roasted, soluble and decaffeinated coffee.

A full list of relevant regulations can be found below:

| Code  | Description  |
|---|--|
| Instrução Normativa Nº. 8, de 11 de junho de 2003     | Technical standards for identity and quality for classification of processed green coffee beans  |
| Instrução Normativa Nº. 16, de 24 de maio de 2010     | Technical standards for roasted coffee beans and for roast and ground coffee.  |
| Instrução Normativa Nº. 6, de 22 de fevereiro de 2011 | Determines that the sensorial analysis for roasted coffee and roast and ground coffee, as provided in MAPA Regulation Act No. 16 of 24 May 2010, will only be required 24 months after the publication of this Regulation Act. |

\* As reported in document [PM-29/13](#), September 2013.

| Code  | Description   |
|---|---|
| Instrução Normativa No. 7, de 22 de fevereiro de 2013                     | To revoke the Regulation Act No. 16 of 24 May 2010, published in Brazil's Federal Official Gazette of 25 May 2010, Section 1.           |
| Resolução de Diretoria Colegiada – RDC Nº. 175, de 8 de julho de 2003     | Technical standards for the evaluation of macroscopic and microscopic materials found in packed food which are harmful to human health. |
| Resolução de Diretoria Colegiada – RDC Nº. 277, de 22 de setembro de 2005 | Technical standards for coffee, barley, maté and soluble products.  |

## CAMEROON

The national body in charge of regulating quality standards for coffee is the Standards and Quality Agency (*Agence des Normes et de la Qualité (ANOR)*).

The national quality standards in Cameroon, or Cameroonian Standards (NC), applicable to coffee are regulated as follows:

- **NC 225:** defines commercial specifications and qualitative classification of coffee beans in terms of varieties, size, shape and colour.
- **NC 229:** defines methods for assessing the moisture content of coffee beans and microscopic examination and determination of defects in green coffee.
- **NC 227:** defines methods on visual and olfactory examination of coffee beans.
- Other criteria such as altitude, regions, preparation, shape and density in Cameroon are contained in the Manual of Good Agricultural Practices (*Manuel de Bonnes Pratiques Agricoles*) produced by Café Afrique, Place de la Gare 9, 1260 Nyon, Switzerland.
- Decree **No 2005/1213/PM** of 27 April 2005 outlines details on the packaging and marketing of green coffee.

Cameroon does not have national quality standards applicable to roasted and ground coffee. However, roasters work on the basis of Codex Alimentarius standards and the European Union regulations. Similarly, there are no national quality standards applicable to soluble coffee.

Cameroon also informed the Secretariat that they do not face commercial barriers due to quality standards regulations because Cameroon adheres to the Codex Alimentarius standards as its basis. In addition, the scale of defects followed by Cameroon is more stringent than the Le Havre classification.

**COLOMBIA\***

National quality standards in Colombia are regulated by the *Comité Nacional de Cafeteros*, which is composed of representatives of the Colombian National Government and by the Colombian Coffee Growers Federation (FNC), according to Resolution No. 5 of 2002. This regulation also resolves minimum quality standards for the export of green coffee beans. Coffee is graded according to its size, moisture content, defects, odour, colour and cup taste. The resulting classifications are as follows:

| Denomination | Description   |
|--------------|---|
| 1. Premium   | Screen size 18, with tolerance of 5% at screen 14                                   |
| 2. Supremo   | Screen size 17, with tolerance of 5% at screen 14                                   |
| 3. Extra     | Screen size 16, with tolerance of 5% at screen 14                                   |
| 4. Excelso   | Screen size 14 with tolerance for 1.5% at screen 12. At least 50% must be screen 15 |
| 5. Caracol   | Screen size 12, with tolerance for up to 10% of flat beans                          |

Defects are classed in two groups:

1. Fully or partially black beans; sour or partially sour beans; faded or oldish beans; faded, amber or buttery beans.
2. Wet or underdried beans; mouldy beans; crystallised beans; faded or streaked beans; over-dried beans; cut or nipped beans; insect damaged; shrunk beans; immature beans; pressed or crushed beans.

A 500g sample of green coffee can contain up to 72 defects, with a maximum of 12 beans from Group 1.

In all cases, moisture content must not exceed 12%, and the coffee must have its characteristic odour, a uniform colour, and be free from defective flavours. The regulation also gives limits for the presence of damage from coffee berry borer.

**COSTA RICA**

Norms and standards in Costa Rica are administered by the Institute of Technical Standards of Costa Rica (*Instituto de Normas Técnicas de Costa Rica, (INTECO)*). In cooperation with the Coffee Institute of Costa Rica (*Instituto del Café de Costa Rica (ICAFE)*), quality standards were developed in 2007 for green coffee and in 2010 for roasted coffee.

At present, all technical norms and evaluation techniques listed in Table 4 and Table 5 for both green and roasted coffee are being revised by INTECO.

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\* As reported in document [PM-29/13](#), September 2013.

**Table 4: Costa Rica – Green coffee quality standards**

| <b>Code</b>        | <b>Description</b>   |
|--------------------|--|
| INTE A75:2011      | Green coffee. Requirements.  |
| INTE A76:2011      | Green coffee. Sensorial analysis.  |
| INTE A77:2011      | Green coffee. Defect reference chart.  |
| INTE/ISO 4072:2011 | Green coffee in bags. Sampling.  |
| INTE/ISO 4149:2011 | Green coffee. Olfactory and visual examination. Determination of foreign matter and defects. |
| INTE/ISO 4150:2011 | Green coffee. Granulometry analysis – manual screening.                                      |
| INTE/ISO 6669:2011 | Green coffee. Determination of density.  |
| INTE/ISO 6668:2011 | Green coffee. Sample preparation for sensorial analysis.                                     |
| INTE/ISO 6673:2011 | Green coffee. Determination of loss of mass at 105°C.  |
| INTE/ISO 6666:2011 | Coffee sampling – Sampler for green coffee and parchment coffee.                             |

**Table 5: Costa Rica – Roasted coffee quality standards**

| <b>Code</b>              | <b>Description</b>  |
|--------------------------|---|
| INTE A78:2011            | Roasted and ground coffee. Requirements.  |
| INTE/ISO 3509:2011       | Green coffee and its derivatives – Vocabulary.  |
| INTE A79:2011/Emm 1:2017 | Roasted and ground coffee. Method for the determination of particle size.   |
| INTE A80:2011            | Roasted and ground coffee. Determination of coffee roasting.  |
| INTE A81:2011            | Roasted and ground coffee. Determination of total ashes (dry basis).  |
| INTE/ISO 20481:2011      | Roasted and ground coffee. Determination of caffeine content using high performance liquid chromatography (HPLC). Reference method.             |
| INTE A82:2017            | Roasted and ground coffee. Determination of total sugar content using higher performance liquid chromatography (HPLC).                          |
| INTE A83:2011            | Roasted and ground coffee. Determination of nipped beans.   |
| INTE/ISO 4833:2011       | Microbiology of food for human and animal consumption. Horizontal method for the enumeration of microorganisms. Colony count technique at 30°C. |
| INTE/ISO 4831:2011       | Microbiology of food and food for animals. General guide for the enumeration of coliforms. Most Probable Number (MPN) technique.                |
| INTE/ISO 11294:2011      | Roasted and ground coffee. Determination of moisture content.   |

Costa Rica developed a geographical registry of origin for Costa Rican coffee which is recognized by the European Union. This register has also been approved by the Industrial Property Registry of Costa Rica.

The geographical registry may be used by all coffee growers who produce, process and export coffee from Costa Rican territory covered in the registry and giving the designation “Café de Costa Rica Diseño” based on the typical qualities of such origin.

## CÔTE D'IVOIRE

The national body in charge of regulating quality standards for coffee is *Côte d'Ivoire Normalisation (CODINORM)*. National coffee quality standards and norms relative to defects of coffee are listed in Table 6.

**Table 6: Côte d'Ivoire – coffee quality standards**

| Document ref:                     | Description                                   |
|-----------------------------------|---|
| Ivorian Standard NI 01 – 1985     | Coffee and its Derivatives – Vocabulary       |
| Ivorian Standard NI 02 – 1985     | Green Coffee Specifications                   |
| Decree No 99-211 of 10 March 1999 | Methods for packaging green coffee for export |

Côte d'Ivoire is currently developing social and environmental standards for coffee.

## CUBA\*

Quality standards in Cuba are administered by the *Oficina Nacional de Normalización*, part of the *Ministerio de Ciencia, Tecnología y Medio Ambiente (CITMA)*. In order to ensure the quality and safety of processed coffee products in Cuba, the following *Normas Cubanas (NC)* are implemented:

| Code              | Description   |
|-------------------|---|
| NC 143:2010       | Code of Practice. General principles of food hygiene. |
| NC 454:2006       | Food transportation.                                  |
| NC 455:2006       | Food handling. General health requirements.           |
| NC 492:2006       | Food storage.   |
| NC 801:2010       | Green coffee. Quality specifications.                 |
| NC 18001:2005     | Workplace safety and health system. Requirements.     |
| NC ISO 9116:2008  | Green coffee. Guide for specification methods.        |
| NC ISO 14000:2002 | Environment.  |
| NC ISO 22000:2005 | Food Safety Management System (HACCP).                |

Furthermore, in terms of food security, the following *Programas Pre-requisitos (PPR)* are implemented:

\* As reported in document [PM-29/13](#), September 2013.

| Code    | Description                                       |
|---------|---|
| PPR-002 | Sanitation.                                       |
| PPR-003 | Control and collection of solid and liquid waste. |
| PPR-005 | Drinking water control.                           |

## DEMOCRATIC REPUBLIC OF THE CONGO (DRC)

The national quality standards for coffee in the Democratic Republic of the Congo are:

Robusta coffee:

- Possess the characteristic aroma
- Moisture content of 12% or less
- Calibration screens used are 17, 15 and 13
- Percentage of type D beans retained by the screen is 70% with 30% tolerance.

Arabica coffee:

- Possess the characteristic aroma
- Moisture content of 12% or less
- Calibration screen used: 20, 18, 17, 16, 14, 12
- Percentage of type D beans retained by the screen is 70%, with 30% tolerance.

## ECUADOR\*

Norms and standards are regulated by the *Instituto Ecuatoriano de Normalización (INEN)*. The regulation which establishes the requisite standards for coffee is *Norma Técnica Ecuatoriana INEN 1123:2006*. It gives the following classification for roasted and ground coffee:

| Denomination | Screen size     |
|--------------|-----------------|
| Extrafino    | Less than 350µm |
| Fino         | 350µm to 500µm  |
| Mediano      | 500µm to 700µm  |
| Grueso       | 700µm to 900µm  |

Furthermore, Ecuador is also undergoing a process of updating its standards regulating green coffee in accordance with ISO norms, including *NTE INEN 285:2006: Café verde. Requisitos*, which covers the classification and specifications of green coffee beans. The following technical norms were updated in 2012:

\* As reported in document [PM-29/13](#), September 2013.

| Code                    | Description   |
|-------------------------|---|
| NTE INEN-ISO 4149:2012  | Green coffee: Olfactory and visual examination and determination of foreign matter and defects. |
| NTE INEN-ISO 6673:2012  | Green coffee: Determination of loss of mass at 105°C.   |
| NTE INEN-ISO 8455:2012  | Green coffee: Guide for storage and transportation.   |
| NTE INEN-ISO 6668:2012  | Green coffee: Sample preparation for sensorial analysis.  |
| NTE INEN-ISO 4072:2012  | Green coffee in bags – sampling.  |
| NTE INEN-ISO 3509:2012  | Coffee and its derivatives – vocabulary.  |
| NTE INEN-ISO 6667:2012  | Green coffee. Determination of the proportion of beans damaged by insects.                      |
| NTE INEN-ISO 1446: 2012 | Green coffee. Determination of water content – basic reference method.                          |
| RTE INEN 068:2012       | Coffee, tea, aromatic herbs and energy drinks.  |

### GABON\*

Commercial coffee in Gabon is sorted at the national level by representatives of the *Caisses de Stabilisation et Perequation (CAISTAB)*, according to the following classifications:

| Denomination | Screen size |
|--------------|-------------|
| Grade 1      | 16          |
| Grade 2      | 14          |
| Grade 3      | 10          |

Subsequently, the coffee is checked for defects by representatives of the *Service du Conditionnement*, part of the Ministry of Agriculture. Defects are allocated a coefficient, as given in the table below:

| Defects                          | Coefficient |
|----------------------------------|-------------|
| Dry affected beans               | 2           |
| Black beans                      | 1           |
| Sour beans                       | 1           |
| Cherry beans (unhulled)          | 1           |
| Quaker beans                     | 0.20        |
| Bleached beans                   | 0.20        |
| Unwanted beans                   | 0.20        |
| Broken                           | 0.20        |
| Coffee berry borer damaged beans | 0.10        |

\* As reported in document [PM-29/13](#), September 2013.

This coefficient is then multiplied by the number of defects in a 300g sample to determine the quality:

| Category  | Number of defects |
|-----------|-------------------|
| Supérieur | Less than 30      |
| Courant   | 30 to 90          |
| Limité    | 90 to 240         |
| Déclassé  | Over 240          |

## GHANA

The national body in charge of regulating quality standards for coffee in Ghana is the *Quality Control Company of Ghana Cocoa Board*.

The quality standards followed by Ghana corresponds to four categories as follows:

- (a) Superior (Grade I): no more than 20% count of defective beans and no more than 4% count of black beans.
- (b) Fair Average (Grade II): Defects 25% maximum and 8% black beans maximum
- (c) Sub-standard (Pickings): Defects 50% maximum and 8% black beans
- (d) Black Beans: 100% black beans

## HAITI\*

The coffee industry in Haiti follows the quality standards of the Specialty Coffee Association (SCA), in terms of the number of defects. Haiti also uses the following specifications for screen sizes:

|                |      |      |      |      |      |      |      |      |      |      |
|----------------|------|------|------|------|------|------|------|------|------|------|
| Screen number  | 10   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   |
| Diameter in mm | 3.97 | 4.76 | 5.16 | 5.55 | 5.95 | 6.35 | 6.75 | 7.14 | 7.54 | 7.94 |

The coffee classifications as given by the *Institut National du Café d'Haiti (INCAH)* are as follows:

| Denomination   | Description                  |
|----------------|------------------------------|
| Haitian Bleu A | 17+                          |
| Haitian Bleu B | 15-16                        |
| Haitian Bleu C | 14                           |
| Café Pilé      | 5X, 3X, XXG, XX, X, BRI, TRI |

\* As reported in document [PM-29/13](#), September 2013.

## HONDURAS

Since 2015, the Honduran Standardization Agency (*Órgano Hondureño de Normalización (OHN)*) has published a set of voluntary Honduran Technical Standards recognized by the ISO that regulates matters relating to coffee quality. Details of Honduran Standard OHN-ISO 3509 2008-11-07 are set out below:

### Section I: Vocabulary

OHN-ISO-3509:2005 'Coffee and coffee products – Vocabulary'

### Section II: Requirements

OHN 50:2011 'Cherry coffee – Requirements'

OHN 60:2011 'Wet processed parchment coffee – Requirements'

OHN 62:2011 'Dry processed parchment coffee – Requirements'

OHN 4:2011 'Green coffee – Requirements'

OHN 41:2011 'Green coffee – Marcala Coffee Designation of Origin – Requirements'

OHN 59:2011 'Green coffee – Honduran Eastern Coffees Geographical Indicator – Requirements'

### Section III: Testing and sampling methods

OHN 51:2011 'Cherry coffee – Determination of defects and foreign matter'

OHN 61:2011 'Wet processed parchment coffee – Determination of defects and foreign matter'

OHN 63:2011 'Dry processed parchment coffee – Determination of defects and foreign matter'

OHN-ISO 4072:1982 'Green coffee in bags – Sampling'

OHN-ISO 6666:2011 'Coffee sampling – Sampler for green coffee or raw coffee and parchment coffee'

OHN 52:2011 'Green coffee – Olfactory and visual examination'

OHN 53:2011 'Green coffee – Determination of defects and foreign matter'

OHN 54:2011 'Green coffee – Sensorial analysis'

OHN-ISO 4150:2011 'Green coffee or raw coffee – Granulometric analysis – Manual and machine screening'

OHN – ISO 6673:2003 'Green coffee – Determination of loss in mass at 105°C'

OHN 65:2011 'Green and roasted coffee – Determination of density by the free fall of whole coffee beans (routine method)'

OHN 11294:1994 'Roasted and ground coffee – Determination of moisture content – by determining loss in mass at 103°C'

OHN-ISO4052:1983 'Coffee – Determination of caffeine content (Reference method)'

### Section IV: Storage and transport

OHN 64:2011 'Green coffee – Guide for storage and transportation'

**INDONESIA\***

National standards for coffee in Indonesia are regulated by Indonesian National Standard #SNI/01-2907-2008 for coffee beans, which gives quality classifications for Robusta and Arabica coffee as follows:

| Denomination | Description                       |
|--------------|-----------------------------------|
| Quality 1    | Maximum number of defects 11*     |
| Quality 2    | Number of defects from 12 to 25   |
| Quality 3    | Number of defects from 26 to 44   |
| Quality 4a   | Number of defects from 45 to 60   |
| Quality 4b   | Number of defects from 61 to 80   |
| Quality 5    | Number of defects from 81 to 150  |
| Quality 6    | Number of defects from 151 to 225 |

\* For peaberry and polyembrio coffee

NB Quality 4 is not divided into category 4a and 4b for Arabica coffee

**MEXICO\***

There are two types of quality standard in Mexico: the first are *Normas Oficiales Mexicanas (NOMs)*, which are mandatory safety requirements required by law. The second type are voluntary compliance standards, known as *Normas Mexicanas (NMX)*, which act as a reference guide of rules, specifications and testing methods. Both sets of standards are implemented by the *Dirección General de Normas*, part of the *Secretaría de Economía*.

According to *NMX-F-551-SCFI-2008*, coffee is graded according to the following specifications:

| Description  | Colour uniformity (%) | Screen size           | Number of defects | % of defects |
|--|-----------------------|-----------------------|-------------------|--------------|
| <b>1. <u>Estrictamente Altura y Altura</u></b>     |                       |                       |                   |              |
| Europea  | 95-100                | 75% > 15<br>25% < 15  | <13               | < 1.5        |
| Americana  | 90-95                 | 75% > 15<br>25% < 15  | 14 < > 26         | > 1.5 <3.0   |
| <b>2. <u>Extra Prima Lavado y Prima Lavado</u></b> |                       |                       |                   |              |
| Europea  | 95-100                | 75% > 14<br>25% ≤ 14  | ≤ 21              | < 1.5        |
| Americana  | 90-95                 | 75% > 13<br>25% =< 13 | ≤30 >1            | 5 < 3.0      |

\* As reported in document [PM-29/13](#), September 2013.

| Description          | Colour uniformity (%) | Screen size          | Number of defects | % of defects |
|----------------------|-----------------------|----------------------|-------------------|--------------|
| 3. <u>Maragogype</u> |                       |                      |                   |              |
| Europea              | -                     | 90% > 19<br>10% > 18 | < 5               | < 1          |
| Americana            | -                     | 90% > 18<br>10% > 15 | < 12              | < 2          |

A full list of NOM and NMX standards affecting coffee can be found below:

| Code                | Description  |
|---------------------|--|
| NOM-002-FITO-2000   | By which the campaign against coffee berry borer is established.   |
| NOM-019-FITO-1995   | By which the exterior quarantine is established to prevent the introduction of coffee pests and diseases.  |
| NOM-149-SCFI-2001   | Café Veracruz – specifications and test methods.   |
| NOM-169-SCFI-2007   | Café Chiapas – specifications and test methods.  |
| NMX-F-013-SCFI-2010 | Pure roasted coffee, in whole bean or ground form, not decaffeinated or decaffeinated – specifications and test methods (cancels NMX-F-013-SCFI-2000). |
| NMX-F-107-SCFI-2008 | Green coffee in bags – sampling.   |
| NMX-F-129-SCFI-2008 | Green coffee – sample preparation for sensorial analysis.  |
| NMX-F-139-SCFI-2010 | Pure soluble coffee, not decaffeinated or decaffeinated – specifications and test methods (cancels NMX-F-139-SCFI-2004).                               |
| NMX-F-158-SCFI-2008 | Green coffee – olfactory and visual inspection – determination of defects and foreign matter.  |
| NMX-F-162-SCFI-2008 | Green coffee – defect reference chart.   |
| NMX-F-173-SCFI-2011 | Roasted coffee mixed with sugar (cancels NMX-F-173-S-1982).  |
| NMX-F-176-SCFI-2008 | Green coffee – determination of loss of mass at 105°C.   |
| NMX-F-177-SCFI-2009 | Specialty green coffee – specifications, classification and sensorial evaluation.  |
| NMX-F-180-SCFI-2010 | Coffee – determination of caffeine content – test method.  |
| NMX-F-181-SCFI-2010 | Green coffee – determination of moisture content – test method.  |
| NMX-F-182-SCFI-2011 | Coffee – determination of caffeine content – high performance liquid chromatography method (reference method).   |
| NMX-F-187-SCFI-2012 | Green coffee – storage and transportation.   |
| NMX-F-551-SCFI-2008 | Green coffee – specifications, preparations and sensorial evaluation (cancels NMX-F-551-SCFI-1996).  |
| NMX-F-552-SCFI-2009 | Decaffeinated green coffee – specifications and test methods (cancels NMX-F-552-SCFI-1998).  |
| NMX-F-586-SCFI-2008 | Coffee and its products – vocabulary – terms and definitions.  |
| NMX-F-593-SCFI-2013 | Green and roasted coffee – determination of density apparent by the free fall of whole coffee beans – routine method.                                  |

| Code                     | Description   |
|--------------------------|---|
| PROY-NMX-F-190-SCFI-2013 | Roasted and ground coffee – determination of moisture content – Karl Fischer Method (reference method). |

## NICARAGUA

In Nicaragua, the National Organization of Coffee Quality Certification (*Organismo Nacional de Certificación de la Calidad del Café (ONCC)*) lays down the mandatory parameters applicable to coffee for export or sale. The two standards which regulate the classification, quality criteria, methods of analysis, sampling, packaging and labelling of green coffee for export and trade are:

|               |                                       |
|---------------|---------------------------------------|
| NTON 03025-11 | applicable to <i>Coffea arabica</i>   |
| NTON 03104-17 | applicable to <i>Coffea canephora</i> |

In addition, Nicaragua applies standard NTON 05 028-13 which seeks to establish the technical and environmental criteria governing the siting, operation, water conservation practices, liquid and solid waste management of wet processing coffee establishments.

## PAPUA NEW GUINEA

National quality standards in Papua New Guinea are regulated by the *Coffee Industry Corporation*. Green coffee is graded according to the criteria described in Tables 7, 8 and 9 below.

Table 7: Papua New Guinea green coffee specifications – Arabica

| Grade      | Cup quality   | Maximum defect allowed<br>(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<br>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 |   | <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)</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) |
| 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)  | 4.40 to 5.60   |                             |   |   |            |                      |          |    |      |      |    |      |      |    |      |      |    |      |      |    |      |      |    |      |      |    |                                  |
| Y          | May lack some uniformity in the cup; Good acidity and body; Some Fruitiness/ wineyness; Good fragrance and aroma        | 70   | Pale green to green         | Clean/fresh, Some fruitiness            |   |            |                      |          |    |      |      |    |      |      |    |      |      |    |      |      |    |      |      |    |      |      |    |                                  |
| Y2         | Irregular cup profile; Fair acidity and body; No foul or foreign flavour  | 150  | Mixed light green to green  | No foul or foreign odours <sup>1/</sup> | Mixed   |            |                      |          |    |      |      |    |      |      |    |      |      |    |      |      |    |      |      |    |      |      |    |                                  |
| Y3         | No foul or foreign flavour  | - Whole and nipped beans should constitute more than 50%<br>- No foreign matter<br>- Must be fit for human consumption | Mixed                       | No Foul or foreign odours <sup>1/</sup> | Mixed   |            |                      |          |    |      |      |    |      |      |    |      |      |    |      |      |    |      |      |    |      |      |    |                                  |

<sup>1/</sup> No foul or foreign flavor and odors relates to phenolic, engine oil, excessive mold and other similar chemical off flavours/odours.

**Table 8: Papua New Guinea green coffee specifications – Robusta**

| Grade      | Cup quality   | Maximum defect allowed<br>(Equivalent per Kg)  | Raw bean colour | Odour                                   | Bean size  |            |                      |          |    |      |      |    |      |      |    |      |      |    |      |      |
|------------|---|--|-----------------|---|--|------------|----------------------|----------|----|------|------|----|------|------|----|------|------|----|------|------|
| R1         | Full, reasonably balanced, uniform, clean, cup; well pronounced body and acidity; Rich and distinct fragrance and aroma | 30   | 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.<br><table border="1"> <thead> <tr> <th>Screen No.</th> <th>Screen Diameter (mm)</th> <th>ISO norm</th> </tr> </thead> <tbody> <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> </tbody> </table> | Screen No. | Screen Diameter (mm) | ISO norm | 18 | 7.14 | 7.10 | 17 | 6.75 | 6.70 | 16 | 6.35 | 6.30 | 15 | 5.95 | 6.00 |
| Screen No. | Screen Diameter (mm)  | ISO norm   |                 |   |  |            |                      |          |    |      |      |    |      |      |    |      |      |    |      |      |
| 18         | 7.14  | 7.10   |                 |   |  |            |                      |          |    |      |      |    |      |      |    |      |      |    |      |      |
| 17         | 6.75  | 6.70   |                 |   |  |            |                      |          |    |      |      |    |      |      |    |      |      |    |      |      |
| 16         | 6.35  | 6.30   |                 |   |  |            |                      |          |    |      |      |    |      |      |    |      |      |    |      |      |
| 15         | 5.95  | 6.00   |                 |   |  |            |                      |          |    |      |      |    |      |      |    |      |      |    |      |      |
| R2         | Neutral Robusta cup; Medium to Fair average quality   | 150  | Green           | No foul or foreign odours <sup>1/</sup> | Mixed  |            |                      |          |    |      |      |    |      |      |    |      |      |    |      |      |
| RT         | No foul or foreign flavour  | - Whole and nipped beans should constitute more than 50%<br>- No foreign matter<br>- Must be fit for human consumption | Mixed           | No Foul or foreign odours <sup>1/</sup> | Mixed  |            |                      |          |    |      |      |    |      |      |    |      |      |    |      |      |

<sup>1/</sup> No foul or foreign flavor and odors relates to phenolic, engine oil, excessive mold and other similar chemical off flavours/odours.

**Table 9: Papua New Guinea – 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                 |
| Floater                               | 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.*

## **RWANDA**

National quality standards in Rwanda are regulated by the *Rwanda Standards Board* and by the *National Agricultural Export Development Board*. Coffee is graded according to its size, moisture content, defects, odour, colour and cup taste. Current regulations are specific to each coffee type (Arabica and Robusta), defining minimum quality standards for the export of coffee beans in order to ensure quality and safety, as stated below:

### **Arabica**

A sample of 350g is taken for both physical and organoleptic analysis (Cupping) in a systematic sensory approach on which the trained cuppers base to grade the coffees as follows:

#### **(a) Fully washed:**

- **Super specialty grade:** score 90-100% points.

No more than 5 full defects in 350g of coffee. No primary defect allowed, must pose at least one distinctive attribute in the body, flavor, aroma or acidity, must be free from cup faults and taints, no quakers, maximum of 5% below screen size indicated. Moisture content between 10-12.5%.

- **Specialty grade:** score 80-90% points.  
No more than 5 full defects in 350g of coffee. Primary defect permitted, maximum of 5% below screen size indicated, must possess at least one distinctive attribute in the body, flavor, aroma or acidity, must be free from cup faults and taints, no quakers. Moisture content between 10-12.5%.
- **Grade 1:** score 70-79% points.  
No more than 9-23 full defects in 350g of coffee. No primary defect allowed, maximum of 5% below screen size indicated, must possess at least one distinctive attribute in the body, flavor, aroma or acidity, must be free from cup faults. Moisture content between 10-12.5%.
- **Grade 2:** score 60-69% points. No more than 24-86 full defects in 350g of coffee.
- **Grade 3:** score 50-59% points. More than 86 full defects in 350g of coffee.

**(b) Semi washed**

- **Grade 1:** score 70-80%.  
No more than 23 full defects in 350g, primary defects are permitted, maximum of 5% below screen size, must possess at least a distinctive attribute in the body, flavor, aroma or acidity. No cup faults are permitted, only 3 quakers. Moisture content between 9-12.5%
- **Grade 2:** score 55-70%.  
No more than 30 full defects in 350g, primary defects are permitted, maximum of 5% below screen size, must possess at least a distinctive attribute in the body, flavor, aroma or acidity. No cup faults are permitted, only 3 quakers. Moisture content between 9-12.5%
- **Grade 3:** score 40-50% points, or 1-2 defective cups. No more than 50 full defects in 350g
- **Grade 4:** score below 40% points or more than 2 defective cups. More than 80 full defects in 350g

**Robusta**

- **Grade 1:** Robusta fully washed
- **Grade 2:** Robusta Semi washed

The specific technical norms, standards and evaluation techniques are given by:

| <b>Code</b>       | <b>Description</b>  |
|-------------------|---|
| RS ISO 10470:2004 | Green Coffee – Defect Reference Chart   |
| RS ISO 9116:2004  | Green Coffee – Guidance on methods of specification   |
| RS ISO 6673:1983  | Green coffee – Determination of Loss in mass at 1050c   |
| RS ISO 8455:2011  | Green Coffee – Guidelines for storage and Transport   |
| RS ISO 4150:2011  | Green coffee or Raw coffee – Size analysis-Manual and machine sieving   |
| RS ISO 4072:1982  | Green coffee in bags – Sampling   |
| RS 97:2007        | Green coffee – Specification  |
| RS ISO 4199:2005  | Green coffee – Olfactory and Visual examination of foreign matter and defects   |
| RS ISO 1446:2001  | Green coffee – Determination of water content – Basic reference method  |
| RS 33:2014        | Roasted coffee beans and roasted ground coffee-Specification  |
| RS 34:2014        | Instant (soluble) coffee – Specification  |
| RS ISO 6670:2002  | Instant coffee – Sampling method for bulk units with liners   |
| RS ISO 20481:2008 | Coffee and coffee products –Determination of caffeine content using high performance liquid chromatography (HPLC) –Reference method |
| RS 259:2014       | Prevention and Reduction of Ochratoxin A contamination in coffee-Code of practice   |
| RS 32:2005        | Glossary of terms used in coffee trade  |

## **SIERRA LEONE**

The national body in charge of regulating quality standards for coffee in Sierra Leone is *Produce Monitoring Board and standard Bureau*. The Native Inspections Rule Cap. 185 is the norm defining coffee quality standards. This norm is currently under review.

Green coffee is graded according to bean size, shape or color, bean density, bean moisture. Defects are characterized by the presence of black beans, abnormally pale beans, badly broken beans, decayed beans or insect damaged beans. Coffee is produce in a friendly atmosphere that has no negative impact on the environment.

Sierra Leone informed the Secretariat that trade barriers are presently determined by the criteria set by buyers overseas which are different from the traditional quality standards of the country - Fair Average Quality (FAQ).

## TOGO

The national body in charge of regulating quality standards for coffee in Togo is the Togolese Standardization Agency (*Agence Togolaise de Normalisation (ATN)*). The country produces dry processed Robusta in the Plateaux Region. Colour varies from pale yellow to greyish green with a moisture content up to 12.5%. Togo does not follow density criteria for coffee quality assessment.

Grade of Coffee size:

|         |           |
|---------|-----------|
| Grade 1 | screen 16 |
| Grade 2 | screen 13 |
| Grade 3 | screen 10 |

Scale of coffee defects:

| Description of defect | Coefficient |
|-----------------------|-------------|
| Dry defective bean    | 2           |
| Black bean            | 1           |
| Cherry bean           | 1           |
| Bean in parchment     | 0.5         |
| Semi-black bean       | 0.5         |
| Shell                 | 0.2         |
| Broken bean           | 0.2         |
| Spongy, white bean    | 0.2         |
| Immature green bean   | 0.2         |
| Undesirable bean      | 0.2         |
| Sour bean             | 1           |
| Insect-damaged bean   | 0.1         |
| Large skin            | 1           |
| Small skin            | 0.3         |
| Large stick           | 2           |
| Medium stick          | 1           |
| Small stick           | 0.3         |

After examining a coffee sample by color, size and defect scale, green coffee is classified in the following categories:

- **Extra:** coffee comprising batches of homogenous colour having a maximum of 15 defects and no black or cherry beans and a maximum of 5 broken bean defects
- **Prima:** coffee comprising batches of homogenous colour, having a maximum of 60 defects with no black or cherry beans and a maximum of 10 broken bean defects
- **Superior:** coffee comprising batches of generally homogenous colour, having a maximum of 60 defects with no black or cherry beans and a maximum of 10 broken bean defects
- **Courant:** coffee comprising batches having no more than 120 defects with a maximum of 5 black or cherry bean defects and 15 broken bean defects.

In addition, Togo informed the Secretariat that they face difficulties in the marketing of ungraded green coffee.

## UGANDA

The national body in charge of regulating quality standards for coffee is the *Uganda Coffee Development Authority* (UCDA).

### Green Coffee

Uganda follows the East African Standard **EAS 130:1999** combined with national green coffee grades and classification, which are specific by coffee type. Tables 10 to 13 detail the grades and classification of green coffee in Uganda.

#### (a) Robusta

**Table 10: Uganda Robusta – natural or washed**

| Specifications |                                  |   |                  |  |
|----------------|----------------------------------|---|------------------|--|
| Grade          | Screen retention                 | Total defects   | Moisture content | Status   |
| SCREEN 18      | 18 = 92%<br>15 = 7%<br>12 = 1%   | 7%  | Up to 12.5%      |  |
| SCREEN 17      | 18 = 7%<br>17 = 90%<br>15 = 3%   | 7%  | Up to 12.5%      | New grade  |
| SCREEN 15      | 17 = 7%<br>15 = 90%<br>12 = 3%   | 12%   | Up to 12.5%      | Existing grade. New screen distribution set up           |
| SCREEN 14      | 15 = 10%<br>14 = 85%<br>12 = 5%  | 10%   | Up to 12.5%      | New grade  |
| SCREEN 13      | 15 = 13%<br>13 = 85%<br>12 = 2%  | 12%   | Up to 12.5%      | New grade  |
| SCREEN 12      | 14 = 13%<br>12 = 85%<br>>12 = 2% | 15%   | Up to 12.5%      | Existing grade. Defects by count lowered from 20% to 15% |
| BHP 1899       | 18 = Minimum 80%                 | Sound bean tolerance = 15%<br>Extraneous matter = 2%<br>Stones & metals = 0%<br>Dust free | Up to 12.5%      |  |
| BHP 1599       | >18 = 10%<br>15 = Minimum 70%    | Sound bean tolerance = 15%<br>Extraneous matter = 2%<br>Stones & metals = 0%<br>Dust free | Up to 12.5%      | New grade  |

| <b>Specifications</b>  |   |   |                         |               |
|--|---|---|-------------------------|---------------|
| <b>Grade</b>   | <b>Screen retention</b>   | <b>Total defects</b>  | <b>Moisture content</b> | <b>Status</b> |
| BHP 1299   | >15 = 10%<br>Retained above screen 12 = min 80%                                 | Sound bean tolerance = 15%<br>Extraneous matter = 2%<br>Stones & metals = 0%<br>Dust free | Up to 12.5%             | New grade     |
| BHP 1199   | Below screen 12   | Sound bean tolerance = 10%<br>Extraneous matter = 2%<br>Stones & metals = 0%<br>Dust free | Up to 12.5%             |               |
| BHP 10.13  | Light & broken beans rejected at primary processing level                       | Sound bean tolerance = 10%<br>Extraneous matter = 2%<br>Stones & metals = 0%<br>Dust free | Up to 12.5%             |               |
| Black Beans  | Black and discoloured beans sorted from export grades by hand or colour sorter. | Sound bean tolerance = 3%<br>Extraneous matter = 2%<br>Stones & metals = 0%               | Up to 12.5%             |               |
| Certified Coffees (Organic, Utz, Rainforest Alliance, Fairtrade, 4Cs verified) | Cleaned and screened above screen 1400 (>14=90%)                                | Maximum defects 12%   | Up to 12.5%             | New grades    |
| Washed Robusta Ungraded  | Screened above screen 1400.   | Maximum Defects 10%   | Up to 12.5%             |               |

Notes: All defect percentages are calculated as per strict count.  
 Primary defects: Full blacks, Full sour/dicoloured/tany oily, severe insect damaged, pods, parchment and foreign matter  
 Secondary defects: Partial Black, Partial sour, Floats, withered, immature, slight insect damaged, broken/chips, shells and husks  
 All the above coffee grades should comply with the following:

- Primary defects tolerance limit: up to – 1% per defect (discoloured limit up to 2%).
- Secondary defects tolerance limit: up to- 3% per defect.
- Should be of good physical appearance, free from all traces of fermentation, mustiness and other undesirable smells and taints.

## (b) Arabica

**Table 11: Washed Uganda Arabica, Bugisu**

| Grade      | Specifications  |  |                  | Status  |
|------------|---|--|------------------|---|
|            | Screen retention  | Total defects  | Moisture content |   |
| BUGISU AA  | 17 = 90%<br>16 = 8%<br>15 = 2%  | 5%   | Up to 12.0%      |   |
| BUGISU A   | 16 = 90%<br>15 = 8%<br>12 = 2%  | 7%   | Up to 12.0%      |   |
| BUGISU A+  | 17 = 60%<br>16 = 30 %<br>15 = 8%<br>12 = 2%   | 5%   | Up to 12.0%      | New grade   |
| BUGISU B   | 15 = 90%<br>14 = 8%<br>12 = 2%  | 10%  | Up to 12.0%      |   |
| BUGISU PB  | 15 = 80%<br>14 = 15%<br>12 = 5%   | 10%  | Up to 12.0%      |   |
| BUGISU AB  | 17 = 8%<br>16 = 60%<br>15 = 30%<br>14 = 2%  | 7%   | Up to 12.0%      | New grade   |
| BUGISU CPB | 15 = 60%<br>14 = 38%<br>12 = 2%   | 12%  | Up to 12.0%      | New grade<br>should have zero<br>tolerance of A<br>and AA |
| BUGISU UG  | Consists of defects<br>sorted out of the export<br>grades by hand or colour<br>sorters. | Sound bean tolerance = 10%<br>Extraneous matter = 2%<br>Stones & metals = 0% | Up to 12.0%      | Exportable<br>undergrade                                  |

Note: Primary defects: Full blacks, Full sour/discooured/tany oily, severe insect damaged, pods, parchment and foreign matter  
Secondary defects: Partial black, partial sour, floats, withered, immature, slight insect damaged, broken/chips, shells and husks  
All the above coffee grades (except undergrades) should comply with the following:

- Primary defects tolerance limit: up to - 1% per defect
- Secondary defects tolerance limit: up to - 1% per defect.
- Should be of a good physical appearance, free from all traces of fermentation, mustiness and other undesirable smells and taints.

**Table 12: Washed Uganda Arabica, Mt. Elgon (new)**

| Grade       | Specifications   |               |                  | Status    | Remarks  |
|-------------|------------------|---------------|------------------|-----------|--|
|             | Screen retention | Total defects | Moisture content |           |  |
| Mt Elgon AA | 17 = 90%         | 5%            | Up to 12.0%      | New grade | <ul style="list-style-type: none"> <li>- Only for coffee from Bugisu and Sebei area around the Mt Elgon.</li> <li>- No primary defects</li> <li>- 5-8 secondary defects</li> <li>- 0-3 quakers in 100gms roasted coffee</li> <li>- Minimum score 80 points on the SCA cupping scale.</li> </ul>  |
|             | 16 = 8%          |               |                  |           |  |
|             | 15 = 2%          |               |                  |           |  |
| Mt Elgon A+ | 17 = 60%         | 5%            | Up to 12.0%      | New grade | <ul style="list-style-type: none"> <li>- Mixture of AA&amp;A of coffee from Mt Elgon</li> <li>- No primary defects</li> <li>- 5-8 secondary defects</li> <li>- 0-3 quakers in 100gms roasted coffee</li> <li>- Minimum score 80 points on the SCA cupping scale.</li> </ul>  |
|             | 16 = 30%         |               |                  |           |  |
|             | 15 = 8%          |               |                  |           |  |
|             | 12 = 2%          |               |                  |           |  |
| Mt Elgon A  | 16 = 90%         | 7%            | Up to 12.0%      | New grade | <ul style="list-style-type: none"> <li>- Only for coffee from Bugisu and Sebei area around the Mt Elgon.</li> <li>- No primary defects</li> <li>- 5-8 secondary defects</li> <li>- 0-3 quakers in 100gms roasted coffee</li> <li>- Minimum score 80 points on the SCA cupping scale.</li> <li>- Tolerance of up to 3% screen 17</li> </ul> |
|             | 15 = 8%          |               |                  |           |  |
|             | 12 = 2%          |               |                  |           |  |

Notes: Percentage Defects by strict count

All the above coffee grades should comply with the following:

- Primary and secondary defects tolerance limits as per the SCA scale
- Should be of a good physical appearance, free from all traces of fermentation, mustiness and other undesirable smells and taints.

**Table 13: Other Arabicas washed or natural (Wugar or Drugar)**

| <b>Specifications</b> |   |  |                         |                     |   |
|-----------------------|---|--|-------------------------|---------------------|---|
| <b>Grade</b>          | <b>Screen retention</b>   | <b>Total defects</b>   | <b>Moisture content</b> | <b>Status</b>       | <b>Remarks</b>                              |
| AA                    | 17 = 90%<br>16 = 8%<br>15 = 2%  | 5%   | Up to 12.0%             | New grade           |   |
| A                     | 16 = 90%<br>15 = 8%<br>12 = 2%  | 7%   | Up to 12.0%             | New grade           | Tolerance of up to 3% retained by screen 17 |
| B                     | 15 = 90%<br>14 = 8%   | 10%  | Up to 12.0%             | New grade           |   |
| PB                    | 15 = 80%<br>14 = 15%<br>12 = 5%   | 10%  | Up to 12.0%             | New grade           |   |
| AB                    | 17 = 8%<br>16 = 60%<br>15 = 30%<br>14 = 2%  | 7%   | Up to 12.0%             | New grade           |   |
| CPB                   | 15 = 60%<br>14 = 38%<br>12 = 2%   | 10 %   | Up to 12.0%             | New grade           | Zero tolerance of A and AA                  |
| TRIAGE                | Light & broken beans rejected from the processing lines                                     | Sound bean tolerance = 10%<br>Extraneous matter = 2%<br>Stones & metals = 0% | Up to 12.0%             | Existing undergrade |   |
| MIXED ARABICA         | Natural and Washed Arabica defect beans rejected from gravity table, sweepings, and sorting | Sound bean tolerance = 10%<br>Extraneous matter = 2%<br>Stones & metals = 0% | Up to 12.0%             | New Grade           |   |

Notes: All the above coffee grades (except undergrads) should comply with the following:

- Primary defects tolerance limit: up to - 1% per defect
- Secondary defects tolerance limit: up to - 3% per defect
- Should be of a good physical appearance, free from all traces of fermentation, mustiness and other undesirable smells and taints.

### *Roasted coffee beans and roasted ground coffee*

Uganda follows the East African Standard **EAS 105:1999** for roasted coffee beans and roasted ground coffee. This standard prescribes the requirements and methods of sampling and testing.

## II. IMPORTING COUNTRIES

### EUROPEAN UNION – CZECH REPUBLIC\*

National quality standards for tea and coffee products in the Czech Republic are regulated by Ministry of Agriculture decree No. 78/2003.

### EUROPEAN UNION – GERMANY\*

The relevant standards for the analysis of coffee and coffee products, as administered by the *Deutsches Institut für Normung (DIN)* are given below:

| Code        | Description   |
|-------------|---|
| DIN 10764-2 | Analysis of coffee and coffee products – Determination of loss in mass of soluble coffee – Part 2: Method using vacuum oven (routine method)  |
| DIN 10764-3 | Testing of coffee and coffee products; determination of dry matter content of soluble coffee, sea sand method   |
| DIN 10764-4 | Analysis of coffee and coffee products – Determination of loss in mass of soluble coffee – Part 4: Method for soluble coffee and soluble coffee products by heating under atmospheric pressure (routine method) |
| DIN 10765   | Analysis of coffee and coffee products; determination of particle size of ground roasted coffee, air-jet sieving method   |
| DIN 10766   | Analysis of coffee and coffee products; determination of water content of green coffee, dioxane distillation, Karl Fischer titration  |
| DIN 10767   | Analysis of coffee and coffee products; determination of chlorogenic acids content; HPLC method   |
| DIN 10768   | Analysis of coffee and coffee products; determination of insoluble matter content of instant coffee   |
| DIN 10772-1 | Analysis of coffee and coffee products – Karl Fischer method for the determination of water content – Part 1: Reference method for roasted coffee   |
| DIN 10772-2 | Analysis of coffee and coffee products – Karl Fischer method for the determination of water content – Part 2: Reference method for soluble coffee   |
| DIN 10775-1 | Analysis of coffee and coffee products; determination of water-soluble extract; method for roasted coffee   |
| DIN 10776-1 | Analysis of coffee and coffee products; determination of pH and acid content; method for roasted coffee   |
| DIN 10776-2 | Analysis of coffee and coffee products - Determination of pH and acid content - Method for soluble coffee   |
| DIN 10779   | Analysis of coffee and coffee products – Determination of 16-O-methyl cafestol content of roasted coffee – HPLC-method  |
| DIN 10780   | Instant coffee – Determination of free and total carbohydrate contents - Method using high-performance anion-exchange chromatography  |
| DIN 10781   | Roasted ground coffee – Determination of loss in mass at 103 °C (Routine method for the determination of moisture content)  |

\* As reported in document [PM-29/13](#).

| Code          | Description  |
|---------------|--|
| DIN 10783     | Analysis of coffee and coffee products – Determination of dichlormethane in decaffeinated green coffee using headspace gaschromatography                   |
| DIN 10785     | Analysis of coffee and coffee products – Determination of acrylamide – Methods using HPLC-MS/MS and GC-MS after derivatization                             |
| DIN ISO 20481 | Coffee and coffee products – Determination of the caffeine content using high performance liquid chromatography (HPLC) – Reference method (ISO 20481:2008) |
| DIN ISO 6673  | Green coffee – Determination of loss in mass at 105 °C (ISO 6673:2003)   |

Furthermore, Germany also implements the *Ordinance relating to coffee, coffee extracts and chicory extracts* of 15 November 2001 (implementing Directive 1999/4/EC of the European Parliament and of the Council of 22 February 1999 relating to coffee extracts and chicory extracts in German law). The Ordinance not only stipulates the labelling of coffee, but also prohibits the marketing of roasted coffee that contains more than two grams of constituents other than green coffee per kilogram unless it is labelled as unsorted coffee or low-quality coffee.

#### EUROPEAN UNION – ITALY

Since 1973, minimum standards for green and roasted coffee have been regulated by the specific legislation *Decreto del Presidente della Repubblica (DPR) 16/02/1973, n. 470: Regolamento per la disciplina igienica della produzione e del commercio del caffè e dei suoi derivati* and *Decreto Ministeriale 20 May 1976: Decaf Coffee*. Tables 14 and 15 contain the details of the Italian coffee quality standards for green and roasted coffee respectively.

**Table 14: Italian coffee quality standards – Green Coffee**

| Parameter                                | Requirements   |
|--|--|
| Last updated                             | June 2018  |
| Product name                             | Coffea arabica<br>Canephora<br>Liberica  |
| Moisture content %                       | ≤ 13 of weight<br>≤ 11 (green decaf) of weight   |
| Adulteration: skins, husks, twigs etc. % | - stones, foreign matter of animal origin ≤ 1<br>- broken beans ≤ 5<br>- holed beans ≤ 10<br>- twigs, husks and such ≤ 5 |
| Max. caffeine content if decaf [%]       | ≤ 0,10   |

**Table 15: Italian coffee quality standards – Roasted Coffee**

| Parameter                      | Requirements  |
|--------------------------------|---|
| Last updated                   | June 2018   |
| Product name                   | Coffea arabica<br>Canephora<br>Liberica   |
| Moisture level %               | Decaf: not exceeding 5% of weight   |
| Adulteration: (skins, husks) % | - stones, foreign matter of animal origin $\leq 1$<br>- broken beans $\leq 7,5$<br>- holed beans $\leq 10$<br>- twigs, husks and such $\leq 5$                |
| Max caffeine if decaf %        | $\leq 0,10$   |
| Other                          | The residue of the solvent used for the extraction of caffeine must not exceed 10 parts per million (dichloromethane) or 15 parts per million (ethyl acetate) |

**NORWAY**

The bodies in charge of regulating quality standards for coffee in Norway are the *Norwegian Food Safety Authority*, the *Norwegian Coffee Association* and the *European Coffee Brewing Centre*. For roasted and ground coffee, grind classification is determined by using the air sieve measure method. Standard grinds are 'filter, french-press and coarse'. Rest-humidity shall never exceed 4%. In terms of dosage, coffee-roasters recommend 60g per litre of water.

**UNITED STATES OF AMERICA\***

Information on coffee standards in the United States is provided by the Agricultural Marketing Service, a department of the United States Department of Agriculture (USDA). The AMS issues Commercial Item Descriptions (CIDs) for agricultural products, which describe the most important characteristics for a specific product. The CID may also provide information on certain analytical tests and requirements for food safety and hygiene. CIDs are not mandatory regulations, but rather provide a procurement description for use by purchasers. The CIDs for coffee and soluble coffee are available on the AMS website at [www.ams.usda.gov](http://www.ams.usda.gov), and provide guidelines on the classification, salient characteristics and analytical requirements for coffee.

The USDA also provides regulations on organic standards through its National Organic Program (NOP), and offers voluntary inspections of grading, certification and verification procedures through its Audit Program.

Furthermore, standards for specialty coffee in the United States are given by the Specialty Coffee Association (SCA). The SCA currently provides standards on green coffee (defects, sample size, lighting and surface), water (for brewing specialty coffee), and cupping

\* As reported in document [PM-29/13](#), September 2013.

(coffee-to-water ratio, vessel size, water temperature, water, grind, roast, roast level, room size, spoon size and table size). More information is available on the SCA website at <http://www.scaa.org/?page=resources&d=coffee-standards>.

### III. NON-MEMBER COUNTRY

#### CHINA

China has not defined a quality standard for coffee at national level, but the coffee planting area in the Yunnan province follows the [4C's baseline sustainability standard](#) with the following characteristics:

#### *Yunnan(China) Washed Arabica*

General quality characteristics:

- 99% trees are Catimor varieties, high yield
- <35% Bean size 18#, most of bean size are 15-17#
- Middle acidity but less body
- Clean cup
- Color sorter machine replace manually hand-sorting because of labor shortage

Three grades of coffee are defined according to the following criteria:

| Grade                    | Maximum moisture content | Minimal bean size  | Maximum triage   | Cup tasting evaluation  |
|--------------------------|--------------------------|--|--|---|
| Simao G 1<br>or Puer G 1 | 12%                      | 75% above screen 15#<br>95% above screen 14#<br>97% above screen 13# | Defect A :10%<br>Defect B : 6%<br>Foreign matter: 0.5% | Aroma, body and flavour balance. Lack of off-flavours like mouldy, fermented, stink, aged, earthy and chemicals |
| Simao G 2<br>or Puer G 2 | 12%                      | Above screen 13#   | Removing Defect B (black, brown)                       | Dealing trade with samples, no need for sensory quality assessment  |
| Pea Beans                | 12%                      | Between screen 13# and 14# bean size                                 | Removing Defect B (black, brown)                       | Dealing trade with samples, no need for sensory quality assessment  |