

ICC 122-12

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**National Quality Standards** 

## **Background**

- 1. The Secretariat is committed to publishing periodic reports on national quality standards for coffee in Member countries, including information on grading and certification systems. To that end, Members were requested in July 2018 to update details of their national quality standards for coffee (see document <u>ED-2271/18</u>).
- 2. Up to 8 August 2018, replies to the ICO request had been received from Angola, Cameroon, Costa Rica, Côte d'Ivoire, the Democratic Republic of the Congo (DRC), European Union (Italy), Ghana, Honduras, Nicaragua, Norway, Papua New Guinea, Rwanda, Sierra Leone, Togo and Uganda. In addition, information has been received from one non-member country, China. Replies to a previous request were received from Brazil, Colombia, Cuba, Ecuador, European Union (Czech Republic and Germany), Gabon, Haiti, Indonesia, Mexico and the United States of America (USA). This report consolidates all the information received and provides a database of national quality standards for coffee in each country.

#### Action

The Council is requested to consider this document.

#### **NATIONAL QUALITY STANDARDS**

The information contained in this document is based on replies received from Members to document ED-2271/18 which requested information on national quality standards, including grading and classification systems. To date, replies on quality standards have been received from the following exporting countries: Angola, Brazil\*, Cameroon, Colombia\*, Costa Rica, Cuba\*, Côte d'Ivoire, the Democratic Republic of the Congo (DRC), Ecuador\*, Gabon\*, Ghana, Haiti\*, Honduras, Indonesia\*, Mexico\*, Nicaragua, Papua New Guinea, Rwanda, Sierra Leone, Togo and Uganda, and five¹ importing countries: Czech Republic\* (EU), Germany\* (EU), Italy (EU), Norway and the United States of America\* (USA). In addition, information has been received from China (non-member country).

The aim of this document is to collate information on the various legislations and regulations concerning national quality standards in Member countries. Where possible, effort has been made to summarize or briefly explain the regulations in place for any given country. However, in some cases, only the respective code and descriptions for the relevant pieces of legislation have been given. The main focus of this document is green coffee destined for export, but information on standards for roasted and ground coffee and soluble coffee have also been given where available.

According to *The Coffee Exporter's Guide* by the International Trade Centre, coffee is usually graded on the basis of one of more of the following criteria:

- Altitude and region
- Botanical type
- Preparation (wet or dry process; washed or natural)
- Bean size, shape or color
- Number of defects
- Roast appearance and cup quality (flavor, characteristics, cleanliness)
- Bean density.

The most common criterion given by Members is the classification system for bean size; therefore, where possible, focus has been placed on giving the definitions of different coffee types according to their screen sizes for each country. In most countries, bean size is determined by passing the coffee over a perforated screen, which retains beans of a certain size while letting smaller beans pass through. The screen size is given in terms of 1/64 of an inch, where screen size 10 is 10/64 of one inch, screen size 12 is 12/64 of one inch, and so forth. Screen sizes are also given in metric units below.

<sup>\*</sup> As reported in document PM-29/13, September 2013.

<sup>&</sup>lt;sup>1</sup> Japan responded that both national and international quality standards for coffee were applied, but did not provide details of such standards.

Screen number	10	12	13	14	15	16	17	18	19	20
ISO dimensions (mm)	4.00	4.75	5.00	5.60	6.00	6.30	6.70	7.10	7.50	8.00

Source: The Coffee Exporter's Guide

Guatemala and Yemen had previously informed the Secretariat that they do not yet implement quality standards for coffee (see document PM-29/13).

The quality standards that Members apply for coffee can be divided in three categories:

- (a) National: Brazil\*, Cameroon, Colombia\*, Côte d'Ivoire, Cuba\*, Czech Republic\*, DRC, Ecuador\*, Gabon\*, Ghana, Honduras, Indonesia\*, Italy, Mexico\*, Nicaragua, Papua New Guinea, Rwanda, Sierra Leone and USA\*.
- (b) International: China and Togo.
- (c) Both national and international: Angola, Costa Rica, Germany\*, Haiti\*, Japan, Norway and Uganda.

Table 1 summarizes the criteria that countries use for quality standards applicable to green coffee and presents the number of grades resulting from the assessment of such criteria. In addition, Table 2 indicates for each country if they reported the presence of social/environmental standards or national quality standards applicable to roasted and ground coffee or soluble coffee. The final column of Table 2 indicates if countries reported commercial barriers due to quality standards regulations.

The Annex (English only) presents in detail each of the national quality standards for coffee as reported by each exporting and importing Member and also one non-member country (China).

The contents of this document are based on information made available by Members and in the public domain. Reasonable effort has been made to ensure its accuracy at time of publication. However, the ICO does not warrant the accuracy of this information and cannot accept responsibility for errors, inaccuracies or omissions that may be contained in this document.

<sup>\*</sup> As reported in document <u>PM-29/13</u>, September 2013.

Table 1: Criteria used for green coffee quality standards by country

	Altitude/	Type	Type	Type Ara./ Rob.	Process/	Bean						Number of	Cup	Sensorial/	
	region		-		preparation wet/dry	Size	Shape	Color	Density	Moisture	Odour	defects	quality/ tasting	aroma, roast, flavour	Number of grades
Angola	✓	✓		✓	✓	✓				✓		✓	8		
Brazil*		✓		✓	✓			✓		✓		✓			
Cameroon	✓		✓	✓	✓	✓	✓	✓		✓		✓			
Colombia*				✓		✓		✓	✓	✓	✓		5		
Costa Rica	✓			✓	✓	✓	✓	✓	✓	✓		✓			
Côte D'Ivoire				✓	✓	✓	✓	✓	✓	✓		✓	5		
Congo, Dem. Rep.		✓		✓				✓				✓			
Ecuador*										✓		✓			
Gabon*				✓						✓			4		
Ghana										✓			4		
Haiti*				✓						✓			4		
Honduras	✓		✓	✓	✓	✓	✓	✓	✓	✓		✓			
Indonesia*		✓								✓					
Mexico*	✓			✓		✓				✓			3		
Nicaragua	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Arab: 17, Rob: 3		
Papua New Guinea		✓		✓		✓				✓	✓	✓	Arab: 5, Rob: 3		
Rwanda		✓	✓	✓				✓		✓	✓	✓	Arab: 9, Rob: 2		
Sierra Leone				✓	✓	✓	✓	✓		✓					
Togo				✓		✓		✓		✓			4		
Uganda	✓	✓	✓	✓				✓		✓			Arab: 19, Rob: 14		
Italy		✓						✓		✓					
USA*				✓	✓	✓				✓	✓				
China				✓				✓		✓	✓	✓	3		

<sup>\*</sup> As reported in document <u>PM-29/13</u>, September 2013.

Table 2: National social, environmental or quality standards and barriers resulting from them

	Social/environmental	Roasted and	Soluble	
	standards	ground coffee	coffee	Reported barriers of trade
Angola	Environmental			
Brazil*		Yes	Yes	
Cameroon	None	International	None	
Colombia*				
Costa Rica		Yes		
Côte D'Ivoire	Under development	No	No	
Cuba*	Yes	No	No	
Ecuador*		Yes		
Ghana	None	None	None	
Mexico*		Yes	Yes	
Nicaragua	Environmental			
Papua New Guinea	None	None	None	
Rwanda	Environmental	Yes	Yes	
Sierra Leone		None	None	Yes
Togo	Environmental	None	Non	Yes
Uganda		International		
Germany* (EU)		Yes	Yes	
Norway		Yes		
USA*				

Notes: a blank means information was not reported or not available.

<sup>\*</sup> As reported in document <u>PM-29/13</u>, September 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
(I) Impurities	
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
(II) Imperfections	
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

								Max	. weight in sam	ple
	Grade	Bean size	Type	Color	Aroma	Roast	Flavour	Flat beans	Impurities	Hollow beans
(1)	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 bad taste or colors which are not normal fo	•	ities or hollow be	ans allowed	d for 3 <sup>rd</sup> qua	lity DD, or w	hich has ar	n intolerable ard	oma, a

#### **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  $Normativa N^o$ . 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*  $N^{\circ}$ . 16/2010. However, this was initially deferred by two years by *Instrução Normativa*  $N^{\circ}$ . 6/2011, and finally repealed in February 2013 by *Instrução Normativa*  $N^{\circ}$ . 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 №. 8, de 11 de junho de 2003	Technical standards for identity and quality for classification of processed green coffee beans
Instrução Normativa $N^{o}$ . 16, de 24 de maio de 2010	Technical standards for roasted coffee beans and for roast and ground coffee.
Instrução Normativa №. 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.

<sup>\*</sup> 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 №. 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 $N^{\circ}$ . 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:

De	nomination	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.

<sup>\*</sup> As reported in document PM-29/13, September 2013.

Table 4: Costa Rica – Green coffee quality standards

Code	Description
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

Code	Description
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 $30^{\circ}\text{C}.$
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:

<sup>\*</sup> 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:

<sup>\*</sup> As reported in document <u>PM-29/13</u>, 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 Stablisation 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

<sup>\*</sup> As reported in document <u>PM-29/13</u>, 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

<sup>\*</sup> As reported in document <u>PM-29/13</u>, 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: T	Testing and	d 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 4072:19	982	'Green coffee in bags – Sampling'
OHN-ISO 6666:20	011	'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 4150:20	011	'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	ŀ	'Roasted and ground coffee – Determination of moisture content – by determining loss in mass at 103°C'
OHN-ISO4052:19	83	'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

<sup>\*</sup> 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
1. Estrictamente Altura y Altu	<u>ra</u>			
Europea	95-100	75% > 15 25% < 15	<13	< 1.5
Americana	90-95	75% > 15 25% < 15	14 < > 26	> 1.5 < 3.0
2. Extra Prima Lavado y Prima	<u>Lavado</u>			
Europea	95-100	75% > 14 25% ≤ 14	≤ 21	< 1.5
Americana	90-95	75% > 13 25% =< 13	≤30 >1	5 < 3.0

<sup>\*</sup> 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 10% > 18	< 5	< 1
Americana	-	90% > 18 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 *Coffea arabica*NTON 03104-17 applicable to *Coffea canephora* 

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 (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	10	Bluish Green	Fresh and clean, no	Displayed as a Suffix. Whe 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.		is e must ove e. No ee is
В	aroma Regular, uniform clean cup;	30	Even, green to	off odours allowed	Screen No.	Screen diameter (mm)	ISO norm
	Medium to high acidy and		bluish green		20 19	7.94 7.54	8.00 7.50
	pronounced body; Rich fragrance and aroma				18 17 16	7.14 6.75 6.35	7.10 6.70 6.30
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	15 PB	5.95 4.37 to 5.55 (single bean/ round	6.00 4.40 to 5.60
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	<ul> <li>Whole and nipped beans should constitute more than 50%</li> <li>No foreign matter</li> <li>Must be fit for human consumption</li> </ul>	Mixed	No Foul or foreign odours <sup>1/</sup>		Mixed	

<sup>&</sup>lt;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 (Equivalent per Kg)	Raw bean colour	Odour		Bean size	
R1	Full, reasonably balanced, uniform, clean, cup; well pronounced body and acidity; Rich and distinct	30	Green	Fresh and clean, no off odours allowed	Displayed as a Suffix. Where specific screen size is designated the coffee must be uniform in size above designated screen size. No suffix means the coffee is mixed size.		e must ove e. No
	fragrance and aroma				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% - No foreign matter - Must be fit for human consumption	Mixed	No Foul or foreign odours <sup>1/</sup>		Mixed	

<sup>&</sup>lt;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
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.

## **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 poses 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 poses at least one distinctive attribute in the body, flavor, aroma or acidity, must be free from cup faults and taints, no guakers. 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 poses 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

Grade2: Robusta Semi washed

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

Code	Description
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		<del>-</del>
Grade	Screen retention	Total defects	Moisture content	Status
SCREEN 18	18 = 92% 15 = 7% 12 = 1%	7%	Up to 12.5%	
SCREEN 17	18 = 7% 17 = 90% 15 = 3%	7%	Up to 12.5%	New grade
SCREEN 15	17 = 7% 15 = 90% 12 = 3%	12%	Up to 12.5%	Existing grade. New screen distribution set up
SCREEN 14	15 = 10% 14 = 85% 12 = 5%	10%	Up to 12.5%	New grade
SCREEN 13	15 = 13% 13 = 85% 12 = 2%	12%	Up to 12.5%	New grade
SCREEN 12	14 = 13% 12 = 85% >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% Extraneous matter = 2% Stones & metals = 0% Dust free	Up to 12.5%	
BHP 1599	>18 = 10% 15 = Minimum 70%	Sound bean tolerance = 15% Extraneous matter = 2% Stones & metals =0% Dust free	Up to 12.5%	New grade

		<del>-</del>		
Grade	Screen retention	Total defects	Moisture content	Status
BHP 1299	>15 = 10% Retained above screen 12 = min 80%	Sound bean tolerance = 15% Extraneous matter = 2% Stones & metals = 0% Dust free	Up to 12.5%	New grade
BHP 1199	Below screen 12	Sound bean tolerance = 10% Extraneous matter = 2% Stones & metals = 0% Dust free	Up to 12.5%	
BHP 10.13	Light & broken beans rejected at primary processing level	Sound bean tolerance = 10% Extraneous matter = 2% Stones & metals = 0% 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% Extraneous matter = 2% 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/discoloured/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

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

Note: Primary defects: Full blacks, Full sour/discoloured/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)

	Specifications		-		
Grade	Screen retention	Total defects	Moisture content	Status	Remarks
Mt Elgon AA	17 = 90% 16 = 8% 15 = 2%	5%	Up to 12.0%	New grade	<ul> <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>
Mt Elgon A+	17 = 60% 16 = 30% 15 = 8% 12 = 2%	5%	Up to 12.0%	New grade	<ul> <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>
Mt Elgon A	16 = 90% 15 = 8% 12 = 2%	7%	Up to 12.0%	New grade	<ul> <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>

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 <u>or</u> natural (Wugar or Drugar)

		Specifications			
Grade	Screen retention	Total defects	Moisture content	Status	Remarks
AA	17 = 90%				
	16 = 8%	5%	Up to 12.0%	New grade	
	15 = 2%				
Α	16 = 90%				Tolerance of up
	15 = 8%	7%	Up to 12.0%	New grade	to 3% retained by
	12 = 2%				screen 17
В	15 = 90%	100/			
	14 = 8%	10%	Up to 12.0%	New grade	
PB	15 = 80%				
	14 = 15%	10%	Up to 12.0%	New grade	
	12 = 5%				
AB	17 = 8%				
	16 = 60%	7%	Up to 12.0%	New grade	
	15 = 30%	776			
	14 = 2%				
СРВ	15 = 60%		Up to 12.0%	New grade	Zero tolerance of
	14 = 38%	10 %			A and AA
	12 = 2%				
TRIAGE	Light & broken	Sound bean tolerance = 10%	Up to 12.0%	Existing	
	beans rejected	Extraneous matter = 2%		undergrade	
	from the	Stones & metals = 0%			
	processing lines				
MIXED	Natural and	Sound bean tolerance = 10%	Up to 12.0%	New Grade	
ARABICA	Washed Arabica	Extraneous matter = 2%			
	defect beans	Stones & metals = 0%			
	rejected from				
	gravity table,				
	sweepings, and				
	sorting				

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 $^{\circ}\text{C}$ (Routine method for the determination of moisture content)

<sup>\*</sup> 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 caffé 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		
	Coffea arabica		
Product name	Canephora		
	Liberica		
Moisture content %	≤ 13 of weight		
Moisture content %	≤ 11 (green decaf) of weight		
	- stones, foreign matter of animal origin ≤ 1		
Adultaration cline bucks turing ato 0/	- broken beans ≤ 5		
Adulteration: skins, husks, twigs etc. %	- holed beans ≤ 10		
	- twigs, husks and such $\leq 5$		
Max. caffeine content if decaf [%]	≤ 0,10		

Table 15: Italian coffee quality standards – Roasted Coffee

Parameter	Requirements	
Last updated	June 2018	
	Coffea arabica	
Product name	Canephora	
	Liberica	
Moisture level %	Decaf: not exceeding 5% of weight	
	- stones, foreign matter of animal origin $\leq$ 1	
Adulteration: (skins, husks) %	- broken beans ≤ 7,5	
Additeration: (Skins, Husks) %	<ul> <li>holed beans ≤ 10</li> </ul>	
	- twigs, husks and such ≤ 5	
Max caffeine if decaf %	≤ 0,10	
	The residue of the solvent used for the extraction of caffeine	
Other	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 <a href="www.ams.usda.gov">www.ams.usda.gov</a>, 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

<sup>\*</sup> As reported in document <u>PM-29/13</u>, 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 <a href="http://www.scaa.org/?page=resources&d=coffee-standards">http://www.scaa.org/?page=resources&d=coffee-standards</a>.

#### 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 <u>4C's baseline sustainability standard</u> 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#</li>
- Middle acidy 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	12%	75% above screen 15#	Defect A :10% Defect B : 6%	Aroma, body and flavour balance. Lack of off-flavours like
orruer o i		97% above screen 13#	Foreign matter: 0.5%	mouldy, fermented, stink, aged, earthy and chemicals
Simao G 2 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