

Protected food, drink or agricultural product name

# Product specification for Café de Galápagos

**A protected designation of origin (PDO)**

Responsible country: Ecuador

**GB number: F0091**

## Competent authority

Name: Ministerio de Producción, Comercio Exterior, Inversiones y Pesca

Address: Plataforma Gubernamental Financiera. Amazonas entre Unión Nacional de Periodistas y Alfonso Pereira.

Quito - Ecuador

Telephone: 593-2 394-8760

Email: dgarcia@produccion.gob.ec, jgranjaa@produccion.gob.ec

## Applicant group

Name: Productora de Café Galápagos Procafe S.A.

Address: Ignacio Hernandez s/n y Teodoro Wolf. Baquerizo Moreno Port, Galapagos Island. (Ecuador)

Telephone: +593-4-2670484

Email: aleximorla@expigo.com

## Type of product (as in Annex XI Implementing Regulation 668/2014)

Class 1.8. other products listed in Annex I to the Treaty (spices etc.)

# 1. Product name(s)

Café de Galápagos

## 2. Description

The protected coffee belongs to the Arabica species, identifying the following varieties: Typica, Bourbon, Caturra, Villalobo, San Salvador, Sachimor, Catimor, Catuai. It is also protected in its different types of commercialization, either in parchment/gold/roasted/ground coffee.

Protected coffee comes from the agricultural zones of the Galapagos Islands: San Cristóbal, Santa Cruz, Isabela, and Floreana. Thanks to the presence of volcanic soils and a variety of microclimates due to the equatorial position of the islands, together with the know-how of the coffee growers, the result is a unique coffee with physical, chemical, and sensory characteristics inherent to the region.

### **Organoleptic characteristics**

Coffee of strong acidity together with a bitterness that leaves a pleasant and prolonged sensation in the mouth. It has a long lasting aroma similar to the smell of peat, ash or earth when roasted, complemented with fruity notes (350 to 480 meters above sea level) while coffees from lower zones have vegetal notes rather than fruity, such as the smell of humidity.

### **Gold Coffee:**

#### **Physical characteristics.**

Density:  $\geq 675$  gr/lit (grams per liter)

Granulometry: at least 75% of the weight of the beans must be  $\geq 15$  mesh and no more than 5% below 14 mesh.

Classification: Maximum 21 secondary defects and 0 primary defects per sample of 350 grams.

Moisture: between 10 - 11% CPS.

Color: Homogeneous green blue (characteristic of a 100% new harvest coffee).

Sensory Note: Clean cup and sensory qualification  $\geq 80$

### **Average chemical composition characteristics**

The following characteristics of chemical composition of Galapagos coffee may vary from harvest to harvest and/or according to the nutrition plan of each lot.

### **Comparative table of physical and chemical characteristics of Galapagos coffee vs. coffee from continental Ecuador.**

<b>PHYSICAL CHEMICAL TESTS</b>	<b>UNIT</b>	<b>GALAPAGOS COFFEE * (%)</b>	<b>COFFEE FROM CONTINENTAL ECUADOR (%)</b>
Protein	%	12,72	14,37
Saccharose (D/W)	%	8,17	8,15
Lipids (D/W)	%	9,77	9,56
Chlorogenic Acid (D/W)	%	8,69	8,70
Caffeine	%.	1,32	1,10
Ferulic Acid	D /W	0,27	0,35

## **3. Geographical area**

Delimited geographical area: islands that are part of the Galapagos Archipelago.

The protected designation of origin is constituted under the name "Café de Galápagos", which clearly identifies the geographical area where coffee is being cultivated, harvested and processed. By this means, the protected area is limited by the islands that are part of the Galapagos Archipelago, located in latitudes 0 ° 30'S and 90 ° 300' approximately 1000 km from the mainland.

Western Hemisphere, Ecuador, islands that form part of the Galapagos Archipelago. The coffee plantations are established within 3.6% of the area destined for human use, between a minimum elevation of 130 meters and a maximum of 600 meters above sea level, in soils with an average pH of 6 (medium to slightly acidic) and textures between sandy-loam to clay-loam.

## MAP OF THE DELIMITED ZONE FOR THE DENOMINATION OF ORIGIN GALAPAGOS COFFEE



### 4. Proof of origin

#### Coffee production, transformation and processing program

The production, processing and preparation of Galapagos coffee with Designation of Origin (D.O.) are subject to a specific traceability and quality control program, based on the present Terms and Conditions, its Internal Control System and external certification. The Regulatory Office (COESCCI article 441) is responsible for disseminating the conditions to be met for the use of the Designation of Origin Galapagos coffee to the actors in the commercial chain and is also in charge of monitoring compliance through its Internal Control System.

The Regulatory Council will ensure that the traceability of the product is carried out and maintained, based on the following information: registry of farms and producer lots, registry of lots and areas, registry of harvests, registry of certified coffee lots,

sales and/or registry of buyers of certified coffees. All of these mechanisms must guarantee the geographical origin of the product.

## **5. Method of production**

Coffee plantations are managed throughout the year, carrying out tasks such as: weed control, pruning, shade regulation, fertilization, phytosanitary control. For harvest, ripe grains collection is carried out in clean containers. Post-harvest is carried out on the same day that harvest is carried out. It consists of buoying, washing, pulping, the length of fermentation is dependent on the room temperature, washing with clean water, drainage and natural drying (sun) in canopy structures. Humidity control is carried out until it reaches 10 - 11%. Coffee is stored in hermetic plastic bags and in Jute or clown-type bags as a second protection. Product is stored in well-ventilated warehouses with good stowage.

### **5.1 Agronomic part:**

**5.1.1 Coffee plantations cleaning:** During first and second year of production, at least one cleaning cycle should be carried out, up to one month before harvest.

From the third year onwards, at least 2 cleanings per cycle should be carried out. First clean: a month after main flowering. Second Clean: a month before harvest.

**5.1.2 Shade tree pruning:** from the second year of use of the PDO, one pruning per cycle should be carried out after harvest. As long as the percentage of shade exceeds 50%.

**5.1.3 Pruning of coffee plants:** from the second year of use of the PDO, carry out one maintenance pruning per cycle after harvest.

**5.1.4 Phytosanitary control:** carry out phytosanitary controls based on a maximum technical assessment up to 1 month before harvesting the ripe cherry grain.

**5.1.5 Nutrition:** from the third year of use of the PDO, if necessary, carry out at least one edaphic application per year, whether it is chemical or organic synthesis. The application will be supported by a soil analysis.

### **5.2 Harvest and post-harvest**

#### **5.2.1 Harvest**

- Harvest ripe cherries (red or yellow), trying not to exceed 20% pinto cherry and 3% green-pinton cherry.
- Collect and transport ripe cherries in clean containers free of any foreign smell.

## **5.2.2 Postharvest and Storage:**

### **5.2.2.1 Wet mill**

- Process the harvested coffee on the same day it is harvested.
- During the entire process, clean water with salinity between 0 to 1.8 mg / l will be used, however it will not be subject to verification of conformity.
- Coffee processing can be carried out both by fermentation (pulping machines) and mechanically.
- During the wet process, coffee must be subjected to a separation or extraction mechanism for the empty beans, brocades and impurities, with the practice of buoying and manual selection.

### **5.2.2.2 Coffee roper drying**

- Drying may be solar or mechanical, through the use of appropriate infrastructure and equipment, in order to achieve a product humidity level between 10-11.0%.
- Each coffee batch must have undergone an organoleptic analysis, which accounts for a clean cup (without defects) and  $\geq 80$  points. A clean cup is the transparency of the beverage, without defects and when it reaches a score of 80 or higher it is considered a specialty coffee by the SCAA, Specialty Coffee Association of America.
- For organoleptic analysis, a random sample will be taken from the total number of bags registered, which will account for the homogeneity of the batch.

### **5.2.2.3 Storage of dry parchment coffee**

- Storage will be done in "GrainPro" bags contained in polyethylene bags, jute, vegetable fibers or other suitable materials of good quality, free of pests and odors, guaranteeing sealing conditions.
- The 'storage place' must guarantee the following conditions: to be clean, ventilated and protected from sunlight. Avoid the presence of any other agricultural product or food, other than coffee.

- Coffee bags should be placed on pallets separated by at least 20 centimetres from the walls, allowing good ventilation between pallets and the ceiling of the storage place.

### **5.2.3 Dry mill (Roasting and Grinding)**

The roasting and grinding of coffee protected under the PDO will be carried out only on lots of gold coffee previously certified, corresponding to current harvest. Old harvest is not allowed.

#### **5.2.3.1 Roasting equipment:**

Roasting will only be carried out with adequate equipment that has internal or external devices that controls temperature and exposure time of the bean. Roasting and cooling processes must be carried out in different compartments or devices.

#### **5.2.3.2 Roasting process:**

Roasting will be carried out by means of processes which allows control of temperature and exposure time of the bean (maximum 20 minutes). Coffee must be cooled immediately after roasting.

#### **5.2.3.3 Grinding equipment**

Grinding will only be carried out with equipment that can be adjusted according to the level of grinding (coarse, medium and fine).

## **6. Link with the geographical area**

The Galapagos coffee is native to the area, as a result of a process of geographical speciation from the introduction of coffee plants to the Islands.

Due to the geographical separation of the Islands, isolation, climatic factors, volcanic soils, the plants have adapted to the environment, which have exerted pressure so that the genetics of the plants cause differences in relation to their peers in the continental zone.

The protected coffee comes from the agricultural zones of the Galapagos Islands: San Cristóbal, Santa Cruz, Isabela and Floreana. Thanks to the presence of volcanic soils and a variety of microclimates due of the equatorial position in the islands, together with the know-how of the coffee growers, result in a unique coffee with inherent physical, chemical and sensory characteristics of the region.

The coffee crops are established between a minimum elevation of 130 meters and the maximum of 600 meters above sea level, in soils with an average pH of 6 (moderately to slightly acids) and textures between Loamy-Sandy to Loamy-Clay.

Galapagos is a volcanic origin archipelago, located almost 1000 km from the Ecuadorian mainland coast. Due to its strategic place where 4 marine currents converge determine the climate of the islands. It has soil rich in mineral, creating ideal conditions for the establishment of coffee plantations. The Province of Galapagos has approximately 750 hectares of coffee, which are distributed between 130 and 600 meters above sea level, making the Galapagos Islands the only place in the world suitable for coffee to be cultivated at this altitude with high quality organoleptic characteristics.

These environmental conditions make the characteristics of Galapagos coffee particular and unique. It has strong acidity, accompanied by a bitterness that creates a pleasant and prolonged sensation in the mouth. It has a permanent, mineral aroma, like the smell of peat, ash, or sand aroma that accompanies the roasted smell. Also depending of the altitude, coffee can have fruity notes if it's cultivated between 350 to 480 meters above sea level and from lower zones, coffee has vegetal notes, such as the smell of humid forest.

The cultivation of coffee dates back to 1879, being part of the productive culture since the first settlers of the islands. Who produced and processed this product for their own consumption and also to commercialize it. Currently, there are many international buyers interested in this product due to its distinguished attributes for its exotic origin and its quality.

The coffee plantations are cultivated with agroforestry systems with endemic species such as *Scalesia pedunculata* and fruit trees such as guabo, citrus, banana and plantain.

In regard of skills, the human factor is fundamental in this purpose, since it is necessary to have trained personnel in each of the processes, from the collection of the strictly ripe bean, passing later through judicious procedures that go from pulping to obtaining a dry parchment coffee bean with 10 to 11% humidity.

Within these factors are the selection of the variety, agronomic work, conservation culture, symbiosis with endemic plants, reduction of pesticides and fertilizers use, harvesting, post-harvest, drying, roasting and grinding.

## **7. Inspection body**



Name: Servicio Nacional de Derechos Intelectuales-SENADI

Address: Avenida Republica E7-197 y calle Diego de Almagro, Edificio Forum # 300

Telephone: 593-2 394 0000

Email: [dorigen@senadi.gob.ec](mailto:dorigen@senadi.gob.ec)

The inspection body conforms to the principles of ISO 17065 standard.

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