

Protected food, drink or agricultural product name

# Single document for LOJANO CAFÉ DE ORIGEN

**GB number: F0090**

A protected designation of origin (PDO)

## 1. Product name(s)

Lojano Café de Origen

## 2. Country

Ecuador

## 3. Description of the agricultural product or foodstuff

### 3.1. 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.)

### 3.2. Description of the producto

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.

### **3.3 Feed (for products of animal origin only) and raw materials (for processed products only)**

### **3.4. Specific steps in production that must take place in the identified geographical area**

All production steps must be carried out in the identified geographical area detailed in the product specification document of PDO

### **3.5. Specific rules concerning slicing, grating, packaging, etc. of the product the registered name refers to**

#### **3.5.1. Container for golden and roasted coffee beans**

Protected coffee beans will be packaged in laminated plastic bags or other of same quality or technology, inside bags should be of Jute, vegetable fibers or other suitable materials of good quality, free of odors, must bear the logo of "LOJANO CAFÉ DE ORIGEN" and marked as follows:

- Product of the Republic of Ecuador
- Type of Coffee: LOJANO CAFÉ DE ORIGEN
- Lot Number (XXXX).
- Exporter: (Any other special trade name adopted by exporters for this particular type of coffee)
- Code:

#### **3.5.2. Packaging of roasted and ground coffee**

It will be vacuum packed or in containers that have a degassing valve. In case that the container does not have a valve, product must be degassed before packaging.

Packaging will be carried out in closed systems allowing preservation of quality for no less than 6 months.

Containers must be label with the following information:

- Roast level: Dark, Medium Dark, Medium or Light Coffee.
- Grinding level: Coarse, Medium or Fine Grinding.

- Visible logo of the PDO.
- Packages will be provided with pre-numbered stamps.

### 3.6. Specific rules concerning labelling of the product the registered name refers to

*Empacado de café tostado en grano y tostado molido*

El café tostado en grano y molido protegido será empacado en empaques resistentes e inocuos que permitan una adecuada preservación del producto, con la siguiente información:

#### 3.6.1. Packing for roasted coffee beans and roasted ground

Protected coffee will be packed in resistant and innocuous packages that allow adequate preservation with the following information:

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LOJA - ECUADOR

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Finca:

Características de la taza:

Altura:

Nivel de tueste:

Nivel de molienda:

Fecha de tueste: d/m/a

LOGO DO

Peso: xxx gr.

## 4. Concise definition of the geographical area

Ecuador, Loja province. Chaguarpamba, Olmedo, Paltas, Celica, Espíndola, Quilanga, Gonzanamá, Calvas, Sozoranga, Macará, Loja, Saraguro, Puyango, Catamayo, Pindal cantons.

Coffee is produced in 15 of the 16 cantons that make up the province of Loja, in different altitudinal levels ranging from 600 to 2200 meters above sea level.

## 5. Link with the geographical area

The main factors at the production level that affect the sensory profile of coffee are:

Natural factors:

Empirically it has been observed that the topography of the province of Loja, with its different altitudes, generates microclimates that favour the production and quality of coffee.

- Biophysical: Soil, temperature, precipitation and luminosity.
- Botanical: Species, variety.
- Geographical: Latitude and altitude.

In order to establish the relationship between protected coffee and the geographical area, the following zoning parameters related to edaphic and climatic variables were determined.

- Edaphic variables: depth, texture, pH, fertility, organic matter, nitrogen, phosphorus, potassium, topography.

Depth	Shallow from 0 to 20 cm Moderately deep from 50 to 100 cm
Texture	Sandy and sandy clay
pH	Acids and slightly acidic from 4.5 to 6.5
Fertility	Low to very low
Organic Matter	Medium to low
Nitrogen	Medium to low
Phosphorus	Generally low
Potassium	Medium to low
Topography	Inclined in most of the coffee growing areas, which determines the presence in most of them of Entisols and Incentisols that represent young soils.

**Table . Classification of soil fertility for properties of interest. Adapted from Sadeghian**

Land Ownership	Unit	Category		
		Low	Mid	High

Organic matter	%	< 8,0	8,0 – 16,0	> 16,0
Nitrogen	%	< 0,34	0,34 – 0,58	> 0,58
Available phosphorus	mg. kg	< 10,0	10,0 – 20,0	> 20,0
Exchangeable potassium	cmol. kg	< 0,2	0,2 – 0,4	> 0,4
Exchangeable magnesium	cmol. kg	< 0,6	0,6 – 0,9	> 0,9

- Climatic variables: Precipitation, temperature and altitude.

The average annual temperature in Loja province ranges from 16°C in Saraguro canton, in the north, to 24°C in Macará, in the extreme south. Rainfall variations throughout the province range from 500 to 1,626 mm. In this region the Andes Mountain range presents its lowest altitudinal distribution and a very particular physiography, this added to the variety of temperatures and different levels of precipitation mean the province of Loja has a great diversity of microclimates: including dry valleys, cloud forests, moorlands and Amazonian forests, which favour the production and quality of Arabica coffee.

#### Precipitation

In the coffee growing areas of the province of Loja, the first rains begin in September-October and with them begins the flowering of coffee, then the rains are concentrated between January and April, which favor an adequate filling of the grain. This annual distribution of rainfall, although concentrated in a few months, nevertheless has a marked influence on the development of the plant, the development of its fruits and, consequently, its quality.

#### 6.1.1 Temperature

The temperature becomes an important factor in the production of quality coffees since the air temperature directly influences the duration of the phenological cycle of the crop, thus conditioning the time and circumstances of the harvest.

In the zone delimited for the DO "Lojano Café de Origen" there are temperatures between 16 and 26 °C, which allow the time elapsed between flowering and the ripening of the fruits to occur in approximately 8 months, facilitating an adequate filling and ripening of the bean and that the harvest takes place in the months when there is no rain (May - August).

The increase in temperature accelerates the development of the fruit of the coffee plant, reducing the duration of its cycle. Thus, the ripening of the fruits can still occur during the rainy season (January - April).

### 6.1.2. Precipitation

In the coffee growing areas of the province of Loja, the first rains begin in September-October and with it begins the flowering of coffee, then the rainfall is concentrated between January and April, which favour an adequate filling of the grain. This annual distribution of rainfall, although concentrated in a few months, nevertheless has a marked influence on the development of the plant, the development of its fruits and consequently the quality.

Rainfall is a fundamental factor for its growth and quality. The number of nodes and leaves formed depends, to a high degree, on the availability of water and energy (solar radiation and temperature), which directly influences the next harvest, given that the number of flowers that the coffee tree can produce depends closely on the number of nodes of the lateral branches.

Once the fruit is developed the internal liquids of the fruit solidify, forming grains. This phase generally occurs in the period from January to March and is the phase of greatest water demand of the plant.

### 6.1.2. Altitude

The altitude is a determining factor in the quality of coffee, since producing coffee at a higher altitude above sea level increases the density and hardness of the beans, as well as the degree of acidity, aroma, flavour and body, which makes the beans and the beverage more appreciated. At lower altitudes, with higher temperatures and humidity, ripening is faster, so a good post-harvest process becomes crucial to improve quality.

The organoleptic profiles of the cup according to coffee varieties:

Variety	Aroma	Fruity flavor	Floral flavor	Vegetable flavour	Dried fruit flavor	Acidity	Body	Bitterness	Sweetness	Balance
Acawa	3,23	2,59	0,14	0,64	1,39	2,95	2,73	0,96	2,32	2,91
Catucai 2SL	3,54	2,83	0,42	0,67	1	3,38	3,21	0,67	2,67	3,67
Catucai 785-15	4	3,75	1	0,25	1,13	3,75	3,5	0,38	3,38	4,13
Catimor	3	1	0	2	2,25	2,75	2,5	1,75	2,13	2,38
Sachimor	3,4	2,15	0,21	0,63	1,79	3,04	2,63	1,08	2,17	3
Bourbon SL 28	4,25	3,5	3,5	0	0,25	3,5	3,75	0,25	3,75	4,12

Caturra	3,53	2,62	0,67	0,75	1,45	3,21	2,92	0,96	2,69	3,07
San Salvador	2,75	2	0	0,5	1,12	2,87	3,18	0,87	2,5	3,06
Typica	3,33	2,15	0,71	0,75	1,44	3,02	2,96	1,03	2,42	3,05
Improved typica	4,75	4,25	2,25	0	0	4,25	3,75	0	3	4,5
Caturra	3,53	2,63	0,68	0,75	1,45	3,21	2,92	0,96	2,7	3,07
San Salvador	2,75	2	0	0,5	1,12	2,87	3,18	0,87	2,5	3,06
Typica	3,33	2,15	0,71	0,76	1,45	3	2,96	1,03	2,42	3,05

The organoleptic profiles are divided into 4 sections according to climatic and geographic characteristics:

For a better understanding of the cup profiles, the name contains information on heights, varieties and the corresponding corridor, as follows: 776: ACAWA (Puyango) (4).

- 776: Corresponds to the height
- ACAWA: Refers to the variety,
- Puyango: Canton to which the coffee belongs, and
- 4: Corridor number to which the canton corresponds.

Variety	Aroma	Fruity flavor	Floral flavor	Vegetable flavor	Dried fruit flavor	Acidity	Body	Bitterness	Sweetness	Balance
776: Acawa (Puyango) (4)	3,25	2,75	0,75	0	0,75	3,25	3,37	0,5	2,75	3,37
798: Acawa (Pindal) (4)	3	3,5	0	0	2	3,25	3	0,25	3,25	3,63
890: Acawa (Pindal) (4)	3	2	0	1,5	1,75	2,75	2,75	1,25	2	2,62
900: Sarchimor (Puyango) (4)	2,75	2,12	0	0,5	1,75	2,75	3	0,75	2	2,87
952: Sarchimor (Chaguarpamba) (1)	3,75	3,25	0,5	0	2	3,5	3	0,75	2,25	3,5

Variety	Aroma	Fruity flavor	Floral flavor	Vegetable flavor	Dried fruit flavor	Acidity	Body	Bitterness	Sweetness	Balance
1001: Sarchimor (Celica) (4)	3,25	2,25	0,25	0,75	1,5	2,75	2,75	1,25	2	2,5
1041: Typica (Chaguarpamba) (1)	3,5	1,62	0	1	2,5	2,5	2,75	2,25	2	2,5
1048: Typica (Macara) (2)	2,87	3	1,5	0,5	0,75	3	3	0,25	3	3,65
1051: Acawa (Paltas) (1)	3	0,5	0	2,5	1,75	2,25	2,5	2,25	1	1,75
1073: Acawa (Puyango) (4)	3,75	3,12	0	0	1,25	2,62	2,5	0,25	2,5	3,25
1204: Typica (Macara) (2)	3,5	3,5	0	0,5	0,75	3,12	3	0,75	2,5	3,37

Variety	Aroma	Fruity flavor	Floral flavor	Vegetable flavor	Dried fruit flavor	Acidity	Body	Bitterness	Sweetness	Balance
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1235: Caturra (Olmedo) (1)	3	0,75	0	2,5	2,5	2	2,62	2,25	1,5	1,62
1240: Catucai 2SL (Sozoranga) (2)	3,37	3,25	0	0	0,75	3,12	3	0,25	2,25	3,25
1285: Typica (Chaguarpamba) (1)	3	1,5	0,5	0	2,25	2,75	2,75	1,5	2	2,62
1292: Acawa (Puyango) (4)	3,75	3,5	0,25	0,5	0,25	3,5	2,25	0,75	2,75	3,25
1355: Acawa (Espindola) (2)	2,87	2,75	0	0	2	3	2,75	1,5	2	2,5
1390: Caturra (Chaguarpamba) (1)	2,25	0,75	0	1,25	1,5	2,5	1,75	1,25	2,25	1,25
1400: Typica (Olmedo) (1)	3	1,5	0	1,25	1,25	2,5	2,5	1,25	1,87	2,75

Variety	Aroma	Fruity flavor	Floral flavor	Vegetable flavor	Dried fruit flavor	Acidity	Body	Bitterness	Sweetness	Balance
1446: Sarchimor (Chaguarpamba) (1)	3	0,75	0,5	1,5	1,75	3	2,25	1,5	2,25	2,62
1482: Typica (Loja) (3)	2,75	0,75	0	1,5	2,25	2,62	2,75	1,5	1,25	2,5
1487: Typica (Quilanga) (2)	3,25	0,75	0	1,25	2,75	2,25	2,75	1,75	1,75	2,5
1495: Caturra (Paltas) (1)	4,25	4,25	0,75	0,75	0,5	3,75	3,5	1	3,25	3,75
1548: Caturra (Olmedo) (1)	4,12	3,25	0,75	0,75	0,75	3,62	3,25	0,25	2,62	3,87
1552: Typica (Sozoranga) (2)	4,5	4	3	0	0	4	3,25	0,25	3,37	4,37
1580: San Salvador (Quilanga) (2)	2,5	2,5	0	0,5	1,25	2,75	3,12	1	2,75	3,12
1593: Typica (Calvas) (2)	2,75	1,5	0	1	2	3	3	1,25	1,5	2,5

Variety	Aroma	Fruity flavor	Floral flavor	Vegetable flavor	Dried fruit flavor	Acidity	Body	Bitterness	Sweetness	Balance
1600: Typic (Loja) (3)	4,75	3,5	3	0	0	4,25	3,75	0,25	3,75	3,37
1656: Catucai 2SL (Espindola) (2)	4	4	1,25	0	0,75	4	3,75	0	4	4,5
1695: Bourbon (Quilanga) (2)	4,25	3,5	3,5	0	0,25	3,5	3,75	0,25	3,75	4,12
1711: Improved Typica (Gonzanama) (2)	4,75	4,25	2,25	0	0	4,25	3,75	0	3	4,5
1721: Caturra (Olmedo) (1)	3,5	2,25	0,25	0	2,37	3,12	2,25	1,25	2,75	3,25



1770: Sarchimor (Espíndola) (2)	3,62	2,62	0	0	1,25	3	2,75	0,75	2,75	3,12
1773: Typica (Loja) (3)	3,5	4	1	0	0	3,5	3,25	0	3,5	4,25

Variety	Aroma	Fruity flavor	Floral flavor	Vegetable flavor	Dried fruit flavor	Acidity	Body	Bitterness	Sweetness	Balance
1833: Typica (Espíndola) (2)	3	0	0	2,75	2,75	2,75	2,5	1,5	2,5	2,75
1916: Typica (Espíndola) (2)	2,75	2	0	0,87	2	3	2,5	1,75	2,62	2,87
1938: Typica (Calvas) (2)	3,5	2,5	1	0	1	3	3,75	0,25	2,25	2,87
2006: Caturra (Espíndola) (2)	4	3,62	3	0	0,5	4,25	4	0	3,75	4,62
2022: Catucai 785 (Espíndola) (2)	5	4,5	2	0	0,5	4	4	0	3,75	5
2107: Caturra (Gonzanamá) (2)	3,62	3,5	0	0	2	3,25	3,12	0,75	2,75	3,12

The different organoleptic profiles dependant on the altitude, soil quality and microclimates of where in the province of Loja the coffee is grown contribute to the overall flavour, aroma, and quality of Café Lojano De Origin.

### 6.1.3 Human factors: Agronomic practices for harvesting, postharvest and storage.

The province of Loja is located in southern Ecuador, where the Andes Mountains have their lowest altitudinal distribution. This place has a very particular physiography that includes dry valleys, cloud forests, paramos and Amazonian forests. In the production zones there are coffee varieties that have adapted well to the altitude, climate and soil. Climatic conditions and the tradition of producing coffee in these agroforestry systems, good harvest and post-harvest practices have given the coffee predominant distinctive characteristics that have been identified by a team of international tasters with Qgrader certification as: "Balanced coffees, with fruity aromas, with sweet flavours of red fruits and panela, citric acidity, medium body, creamy, clean and with a long aftertaste".

In the province of Loja, Arabica coffee is grown together with fruit trees, forest trees, short cycle plants, even medicinal and forage plants, this production system is known as the traditional "Loja orchard". According to historian Galo Ramón (2018) this type of orchard was an ancestral technique of the "paltas" (pre-Inca people that inhabited this region) to obtain a diversified production and to be able to conserve the humidity and fertility of the soil through multiple associations. Coffee was introduced into this diversified system. This production technique has been transmitted from generation to generation in the coffee growing families of Loja and is still preserved today.

The cultivation of coffee in Loja has been an activity that has been transmitted from parents to children; coffee growers living on their small farms have generated an essentially family vocation to produce coffee. The family is in charge of the cultivation, harvest and post-harvest, guaranteeing a special commitment with the product that leaves the farm, consolidating little by little the culture of quality coffee that today is developed in the different producing cantons.

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