Protected food, drink, or agricultural product name

Product specification for Café de la Sierra Nevada

A protected geographical indication (PGI)

Responsible country: Colombia

GB number: F0103

This document sets out the elements of the product specification for information purposes.

Competent authority

Name: Superintendence of Industry and Commerce

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Applicant group

Name: FEDERACIÓN NACIONAL DE CAFETEROS DE COLOMBIA

Address: Calle 73 Nº 8 - 13 Bogotá D.C.

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Composition: Producers/processors Other

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)

2. Description

Coffee grown in the geographical area is characterized by having a clean and balanced cup with a medium-high and uniform body, medium acidity, with flavours similar to chocolate. In its fragrance and aroma, sweet and nutty notes are perceived. The product comes exclusively from the coffee arabica species grown in the geographical area.

The coffee bean is the seed of a tropical shrub with green leaves, called coffee tree. Coffee belongs to the Rubiaceae family and to the Coffea genus. There are numerous species of coffee plants and different varieties of each species. The most commercially important species are known as Coffea Arabica Linnaeus (known as Arabica coffee) and Coifea Canephora Pierre Ex Froehner (known as Robusta coffee).

Taxonomic Description: In the coffee growing zone of the Sierra Nevada, as in the rest of the Colombian Coffee Growing Zone described in the Colombian Coffee Denomination of Origin, the species Coffea arabica and the varieties that, duly evaluated by Cenicafé can be considered as varieties subject to be catalogued as Colombian Coffee, are cultivated. The product CAFE DE LA SIERRA NEVADA exported or consumed can be of only one of these varieties or a mixture, depending on the varieties chosen in the production zones, but all of them come exclusively from the Coffea arabica species.

Chemical composition:

The nutrient and mineral contents in the soil of the Sierra Nevada coffee zone are related to the minerals found in the coffee bean. So then, the potassium in the coffee bean represents approximately 40% of the mineral content of ground coffee. Phosphorus represents 4% of its mineral composition. The remaining content is made up of approximately 30 different elements, including magnesium, calcium, and sulfur.

Within the chemical composition of coffee, around a thousand compounds have been identified, of which some have been identified as chemical precursors associated with some sensory attributes of the coffee drink. The variation of compounds depends on the environmental conditions. Among the compounds that give it quality are:

• Caffeine: This substance is partly attributed to the bitter taste of the coffee drink.

- Trigonellin: It influences the bitter taste, and this compound is known for its direct contribution to the formation of aromas during roasting.
- Lipids: Contribute to the transmission of flavors and odors and are carriers of aroma, they are related to coffees with good acidity.
- Sucrose: It gives sweetness to the drink; it has an important role during the roasting process. High levels of reducing sugars (glucose, fructose, and maltose) are presumed to improve the quality of the coffee drink; they are also related to higher acidity and better cup quality.
- Chlorogenic acids: Their concentration varies according to the degree of maturation and the environment where the coffee is planted. They participate in the formation of the aroma and many of the astringent characteristics of the drink is attributed to them.

3. Geographical area

The delimited geographical area is made up of thirty-three coffee-growing municipalities of the Republic of Colombia, located in the departments of Cesar, Guajira, and Magdalena.

-Department of Cesar: Aguachica, Agustín Codazzi, Becerril, Chimichagua, Chiriguana, Curumani, Gonzales, La Gloria, La Jagua de Ibirico, Pailitas, Pelaya, Rio de Oro, La Paz, San Alberto, San Martin, Valledupar, Manaure, Pueblo Bello y el Copey.

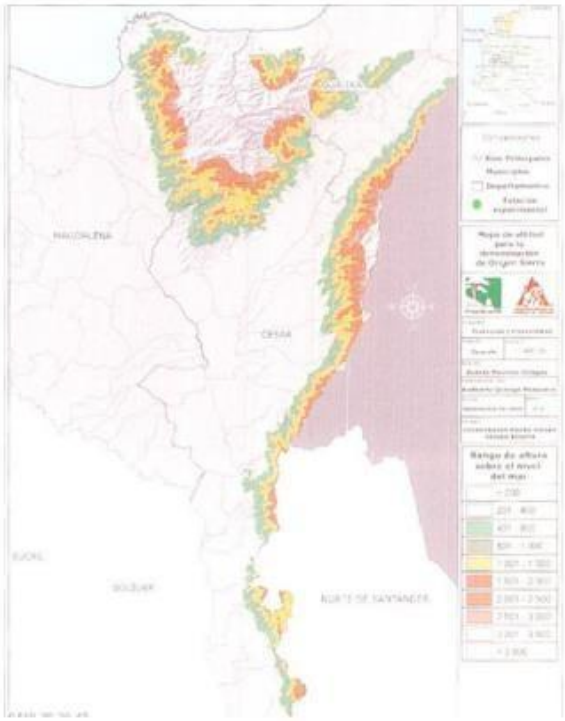
- Department of Guajira: El Molino, La Jagua del Pilar, Urumita, Villanueva, Riohacha, Dibulla, Barrancas, Fonseca, Hato Nuevo, San Juan del Cesar.

- Department of Magdalena: Santa Marta, Aracataca, Ciénaga y Fundación.

The territories located in the Sierra Nevada de Santa Marta are in the ranges of 10.2 ° to 11.3 ° north latitude and from 72.7 ° to 74.2 ° west longitude (departments of Guajira, Cesar, and Magdalena).

The territories of the Serranía del Perijá or Serranía de Los Motilones are in the ranges of 7 ° to 11 ° north latitude and 72 ° to 73.6 ° west latitude (Cesar, Guajira departments).

All at an altitude between 500 and 1900 meters above sea level.



4. Proof of origin

In 1938, the National Federation of Coffee Growers (NFC) created the National Coffee Research Center, Cenicafé, with the purpose of studying the aspects related to the production in the farms, the harvest, the processing, the quality of the bean, the management and utilization of the by-products of the coffee exploitation, and the conservation of the natural resources of the Colombian coffee region.

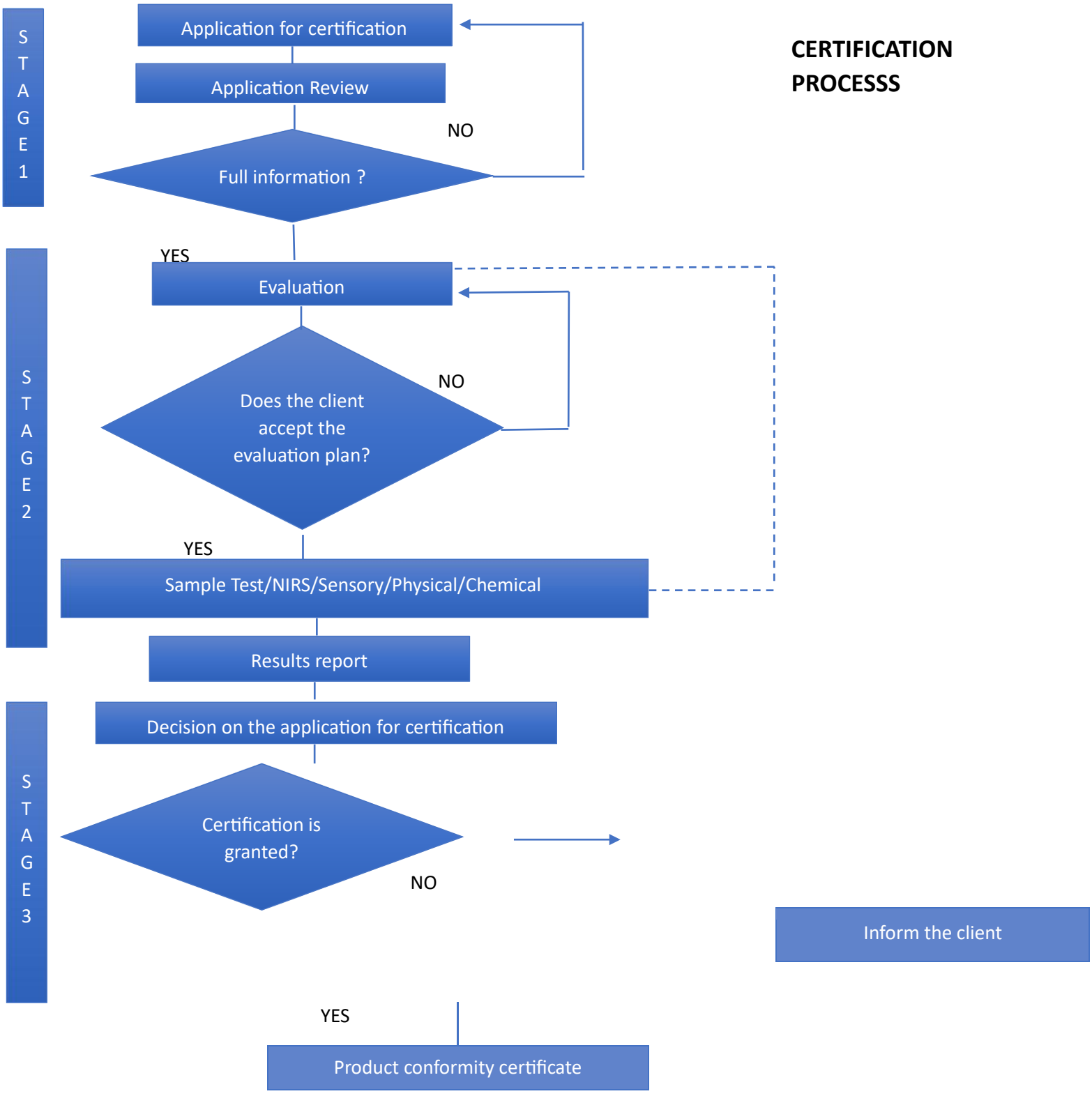
In the coffee zone of the Sierra Nevada, the Coffea arabica species is grown and the varieties, duly evaluated by Cenicafé.

The exported or consumed CAFE DE LA SIERRA NEVADA product can be from just one of these varieties or a mixture, depending on the varieties chosen in the production areas, but all come exclusively from the Coffea arabica species.

Among the main coffee varieties of the Coffea arabica species grown in the Sierra Nevada coffee zone and reported in the Coffee Information System (SICA) database are mainly the Caturra, Tipica, Tabi, Colombia, and Castillo varieties, including the regional version Castillo Pueblo Bello, which have a high degree of similarity from the point of view of genetic origin.

The steps of the certification process are as follows

CERTIFICATION PROCESSS





To verify the characteristics of the Coffee there is a Product Certification Body that is in charge of evaluating the conformity of the products, and to carry out the certification of the conformity of the product, it must take into account the following criteria:

- Species: Washed mild Arabica coffee
- Organoleptic characteristics: Clean, balanced cup, with a medium-high and uniform body, medium acidity, and chocolate flavors. In its fragrance and aroma, sweet and nutty notes are perceived.

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The coffee must come from the coffee zone of the SIERRA NEVADA and must have undergone selective harvesting processes, wet processing, threshing and classification.

To verify the above, one or more of the following methods will be followed: i)

test or type examination; and

ii) testing or inspection of samples taken on the market, in the operator's warehouse, or a combination of both.

For the issuance of the certification, verification and adoption of the procedure established in literal i) above is sufficient.

There is a dynamic information system (SICA), which is updated regularly, and that coordinates and executes the FEDERACION NACIONAL DE CAFETEROS DE COLOMBIA, through the Departmental Committees of Coffee Growers and their extensionists farms, located in the capitals of the coffee departments belonging to the Colombian Coffee Zone and therefore, the coffee zone of Sierra Nevada.

The SICA contains socioeconomic information, allowing identification of all cultivation areas, and their related data.

There are follow-up and traceability control mechanisms in place for the parchment coffee that leaves the farms or mills, and which is moved from one place to another within Colombia. This tracks the coffee that leaves the geographical area delimited in this application, for domestic consumption as well as for export.

There is also a control of threshing machines, as provided in Article 344 of Decree 2685 of 1999, in the sense that they must be registered with the National Federation of Coffee Growers of Colombia. This registration is regulated by Resolution 1 of 2002 of the National Committee of Coffee Growers (Annex VIII). Registration with the Federation is valid for one year and is renewable for equal periods of time.

Once the coffee has been threshed and the green coffee beans have been obtained, the transporter that will take the coffee to the port of shipment must obtain two documents that accredit the legality of the circulation of the product within the national territory. These documents are the Certificate of Revision and the Transit Guide.

The issuance of both documents is subject to the content of Decree 2685 of 1999 (articles 346 and 347 respectively). The purpose of the revision certificates is to physically check the weight of the cargo, and it is issued by ALMACAFE at the place of origin of the coffee or where it was collected.

This document, nowadays electronic, is delivered to the exporter so that with the data contained therein the respective Transit Guide is obtained. The Transit Guide contains a declaration based on the information provided by the individuals and verified by the coffee authorities, regarding the exporter, the merchandise and the route.

The coffee for definitive export is subject to control by Almacafé, the entity entrusted by the National Federation of Coffee Growers of Colombia to carry out this process, expressed in the Quality Certificate, which for this purpose is the weighing certificate, with which weight and quality are verified. The revision is made on each lot-truck or

wagon lot, by stratified, random and progressive sampling. The pallets are the strata. The visible number of bags determines the number of samples, which are taken randomly. The analyses are more numerous on larger samples, when the first one indicates that it is not a good quality lot, beyond the limits of acceptance.

In relation to this control, it is important to highlight, once again, that Colombia is the only coffee producing country that carries out quality controls in port for the coffee that is exported, with the purpose of ensuring that the product is of excellent quality, in accordance with the characteristics of the coffee produced in the Colombian Coffee Growing Region. Therefore, it will apply the same controls for the export of CAFÉ DE LA SIERRA NEVADA.

On the other hand, in accordance with article 25 of Law 9 of 1991, all exporters of green coffee must register as such before the Ministry of Foreign Trade, having heard the opinion of the National Federation of Coffee Growers, according to the norms and criteria established by the National Committee of Coffee Growers. The aforementioned registration is regulated in Resolution No. 5 of 2015 issued by the National Committee of Coffee Growers.

The exporter of processed coffee additionally needs a Certificate of Conformity issued by the Federation, in accordance with a document submitted by a third party professional in the subject of quality. The purpose of this is to guarantee the conditions of the plant in terms of quality assurance, good manufacturing practices and packaging. In other words, exporters of processed coffee must have a license to export roasted coffee, as well as comply with precise packaging requirements that guarantee the conservation of the product.

5. Method of production

The phases of the production method that are carried out in the delimited geographical zone are: harvesting (picking and selection) and wet processing of the coffee (pulping, sifting, removal of mucilage, washing, drying and storage),

There are two other phases of the process that do not necessarily have to take place in the delimited geographic zone, these are: the threshing of the dry Pergamino coffee and the roasting of the coffee.

Coffee fruit (the cherry):

The coffee beans or seeds are contained in the fruit of the bush. At maturity this bean is red or yellow in colour and is called the cherry. Each cherry is made up of an outer skin (exocarp) that surrounds the sweet pulp (mesocarp). Underneath the pulp are the beans covered by a golden membrane (commonly called parchment), which surrounds the two coffee seeds (endosperm).

When the fruits are at their optimum state of maturity, they are harvested manually in order to collect only the red or yellow beans that are ripe. Cherry coffee should have the following characteristics: red or yellow color, appearance of healthy beans.

Harvest

Fruit maturity reaches its fullness around 227 ± 10 days after flowering occurs.

This manual and selective selection of ripe coffee fruits are of vital importance, since it influences the preservation of the characteristics of the product in later stages, and is presented with particular care, given the cultural processes associated with the harvest.

Harvest times in the Sierra Nevada coffee zone

The is a period from January to March when there is little rainfall. The flowering season occurs between March and April once the rainy season begins. After this, the fruit develops. The main harvest period for CAFÉ DE LA SIERRA NEVADA begins in September and lasts until February.

Parchment Coffee:

After harvesting the ripe or cherry coffee, it is pulped, the mucilage (mesocarp of the bean) is removed by means of fermentation of the bean or by mechanical means, it is washed and then dried. This process is known as wet milling.

Coffee processing by wet milling

Pulping of the coffee: In this stage, the peel of the fruit and also the mesocarp or pulp of the coffee beans are removed using pulping machines.

Sieve: Employing a tool, the pulped coffee is cleaned. This procedure allows a classification of the coffee so that the best coffee beans remain.

Mucilage removal (fermentation): It refers to the removal of mucilage, consisting of detaching the portion of the mesocarp, called mucilage from the endocarp of the grain, using natural fermentative procedures.

During natural fermentation, bacteria, yeasts and enzymes act that transform the peptic compounds and constituent sugars of the coffee mucilage into alcohols and carboxylic, acetic, lactic, propionic and butyric acids, which are then removed in the wash. The separation of the mucilage by fermentation is done by leaving the pulped grains in tanks or containers with water, usually for 16 to 18 hours, depending on the altitude and temperature conditions.

Coffee washing: In this procedure, the parchment coffee (pulped - fermented) is washed and drained, removing the products solubilized in the previous stage.

This process of wet processing is usually carried out on farms in the coffee zone delimited for purposes of the CAFÉ DE LA SIERRA NEVADA designation of origin.

Drying: It is carried out slowly and at low temperatures through the action of the sun's rays on cement patios, also by mechanical drying by means of walkways, house elbas (coffee drying building) and solar canopies (greenhouse type wood structure). The current regulations for the commercialization of dry parchment coffee in Colombia establish a moisture content of 10 to 12% (quality standard No. V7 of May 1993) and, the CAFÉ DE LA SIERRA NEVADA, because it belongs to Colombia, complies with these humidity ranges. After this process, parchment coffee is obtained.

Once the coffee has been dried, it is called parchment coffee, since it is covered by an opaque yellow layer similar to parchment. This parchment coffee should be threshed to obtain green coffee or also known as almond coffee.

Dry parchment coffee Storage: To maintain the quality, appearance and flavor of the coffee, dry parchment coffee with humidity between 10% and 12% are stored in warehouses, where the temperature must be below 20 ° C and the humidity in values around 65%.

Threshing: Dry parchment coffee is threshed in companies called coffee threshers where the endocarp is separated from dry parchment coffee in threshing machines, to obtain almond coffee, which is classified in machines by size, density, gravity, followed by classification by color, which can be manual and/or electronic, to separate the defective beans and obtain the almond coffee (green coffee).

As of June 1, 2015, a total of 7 threshing machines were registered in Cesar, Guajira and Magdalena, which are part of the 163 registered and authorized Colombian threshers. Thus, it is necessary to specify that, although the CAFÉ DE LA SIERRA NEVADA is not threshed in threshing machines located in the municipalities that are part of this coffee zone, this circumstance does not necessarily affect the traceability and monitoring of green coffee.

Coffee Processing

Coffee roasting is a phase of the process that does not necessarily take place in the defined geographical area. It consists of applying heat to the green bean, as a previous step to its use as a raw material in the production of the coffee drink. There is no single way of roasting coffee that will depend in any case on cultural factors of

the final market, it means then that the organoleptic or sensory characteristics of CAFÉ DE LA SIERRA NEVADA will remain present in the final drink, as these are closely linked to the chemical composition of green coffee.

6. Link with the geographical area

The coffee growing zone of the Sierra Nevada presents a geographical and climatic environment that together allow us to find certain aspects that differentiate it from other coffee producing regions in the country. Some of these factors are the conditions of water deficit during the quarter between December and February, a situation that originates from the requirement of shade for the cultivation of coffee. Likewise, the soils of the coffee growing zone of the Sierra Nevada are, as a general rule, of a clayey nature with low nutrient content for the crop. The physical condition of the soil contrasts well with the variables of ph, phosphorus, and potassium content. Taking into account the high luminosity during certain periods of the year and the absence of rainfall, coffee cultivation in the Coffee Growing Zone of the Sierra Nevada is characterized by being planted mainly under total shade (29.3%) or semi-shade (64.64%) for a total of 93.98%. This shade is obtained with low levels of technology, through native trees, located at different planting distances.

Therefore, the medium-high body and the medium acidity are due to the concentration of lipids and chlorogenic acids, which are higher in this area of the country as it is the region with the lowest elevation above sea level. There is a relationship between altitude above sea level and chemical compounds whereas altitude increases, the total lipid content increases, and the contents of stearic fatty acid and total chlorogenic acid, which contribute to the body in the coffee beverage, increase (Betrand et al, 2006).

For its part, the sweet, chocolatey, and nutty notes are determined by the lipid sugars that participate in the Maillard reaction, which influences the formation of the aroma and the derived compounds for the product. In addition to the above, the higher levels of theobromine are linked to a greater taste of cocoa and its drink, chocolate, while the nutty flavors are related to the concentration of fatty acids (oleic and linoleic) that represent close to 70% of the total fatty acids. Lipids are in the order of 16%, a higher percentage than other similar products, which is associated with the nutty taste.

Thus, the annual temperature range of the area and the humidity index in the soil increase the residual flavor attributes. In addition, the annual precipitation and the value of the climatic variables increase the sensory variables. The chocolate notes are due to the higher temperatures favoring a greater accumulation of caffeine, which in turn is a precursor of theobromine, a component present in cocoa.

Finally, regarding the link, the product presents various causal relationships with the delimited geographical area. In particular concerning: the elements of climate and bioclimatic indicators, the contents of chemical precursors, the chemical contents of the soil, the content of minerals in the grain and the content of chemical compounds in the grain. Potassium in the coffee bean represents approximately 40% of the mineral content of ground coffee. Phosphorus represents 4% of its mineral composition. The remaining content is made up of approximately 30 different elements, including magnesium, calcium, and sulfur.

From what has been described, it can be concluded that the coffee grown and produced in the delimited geographical area has special characteristics that are provided by the weather conditions and the soil in which it is produced, from which the causal link is derived between the geographical area and quality of the CAFÉ DE LA SIERRA NEVADA.

7. Inspection body

Name: FEDERACIÓN NACIONAL DE CAFETEROS DE COLOMBIA, which decides the applications for authorization to use the denomination of origin stamp based on the report provided by the FOUNDATION FOR THE CERTIFICATION OF COFFEE OF COLOMBIA - CAFECERT.

Address: Calle 73 Nº 8 - 13 Bogotá D.C.

Telephone: (+57) (1) 3136600 – (+57)(1) 3257421

Email: cafecert@fundacioncafecert.org

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

8. Labelling

Article 11 of the DO (designation of origin) Use Regulation contains the following provisions regarding the labeling of the final product to be marketed:

"11.1. Green coffee destined for national consumption protected under the CAFÉ DE LA SIERRA NEVADA Designation of Origin, must comply with the following on its labeling:

a) Identify yourself according to the type of preparation of the product:

For exalted or supreme: it will be identified with the inscription DO CAFÉ DE LA SIERRA NEVADA, CAFÉ DE LA SIERRA NEVADA, adding the origin COLOMBIA or

CAFÉ DE LA SIERRA NEVADA - COLOMBIA followed by the expression exalted or supreme. Example: CAFÉ DE LA SIERRA NEVADA SUPREME - COLOMBIA.

For consumptions and “pasilla” (coffee below standard): it will be identified only with the inscription DO CAFÉ DE LA SIERRA NEVADA, CAFÉ DE LA SIERRA NEVADA, or CAFÉ DE LA SIERRA NEVADA - COLOMBIA.

In any case of marking, the product must include the word COLOMBIA or COLOMBIANO, highlighting the origin of the coffee.

b) In the case of bulk shipments, the coffee must carry the information indicated in literal a), in the attached document.

c) Additionally, it must be marked according to the regulations established by the competent national and international authorities on the technical and commercial information that coffee bags must display, such as the OIC batch number;

d) Trademarks, product descriptors and/or countermarks that denote a generic or specific origin must not evoke or imitate the origin or the DO CAFÉ DE LA SIERRA NEVADA