

## Dulce de Leche - Product specification sheet

Product name: Dulce de leche La Paila - regular  
Code: 102  
Description: Caramel spread made principally of Bovine milk and cane sugar

Dulce de leche specs update: 05/02

*List of ingredients in descending order:*

<u>Ingredient</u>	<u>%</u>	<u>Country of origin</u>
Bovine milk	63,1	Argentina
Cane sugar	17,4	-
Bovine milk skimmed	12,61	-
Glucose	6,81	-
Sodium bicarbonate	0,07	-
Natural vanilla	traces	-

Does not contain preservatives  
Does not contain artificial colouring

*Product description:*

Appearance (shape, colour, size/count etc.): Dulce de leche is a caramel spread of brown shiny caramel colour, consisting principally of a mixture of milk and cane sugar that in the vast array of dairy products. Dulce de leche belongs to the chapter of milk conserved by evaporation and concentration.

*Taste:*

Sweet. Creamy flavour with an agreeable aftertaste.

*Texture:*

Semi solid, very spreadable.

*Smell:*

Caramel.

*Product life and storage*

Shelf life of product from production: 18 months  
Shelf life of product once opened: refrigerated 12 months  
Storage conditions: ambient  
Storage conditions once opened: must be refrigerated

*Batch Codes:*

Coding information contains Day, Month, Year and Batch of fabrication printed on jar or rim of lid.

*Packaging Profile:*

Unit packaging description (materials, shape, colour etc.): Product packed in glass jars with a tin axial 63 mm lid. Jar is translucent and lid has a "Pop up" to indicate if tampered.

*Case packaging description (materials, shape, colour etc.):* Case is made of cardboard with dividers, each case contains 12 jars and is white.

*Unit dimensions:*

Width: 70 mm  
Height: 130 mm

*Case dimensions:*

Length 235 mm  
Width: 155 mm  
Height: 140 mm

Unit per case: 12  
Cases per layer: 15  
Layers per pallet: 7

**Nutritional and analytical data:**

<u>Component</u>	<u>Average values per 100 g</u>
Total solid/ Dry matter	70
Total moisture	30
Protein	5,3
Total fat	4,8
- of which saturates	2,4
Total carbohydrates	58,6
Sodium [Na] (not salt)	0,1
Fibres	less than 0,1
Energy – Kj	1270
Energy – Kcal	300

	<u>Target</u>	<u>Min.</u>	<u>Max.</u>	<u>Frequency of testing</u>	<u>Method used</u>
aw (water activity)	0,8				
Brix (soluble solids)	69	68	70	Per batch	Refractometer
pH	6,2	6	6,4	Per batch	Electronic pHmeter

**Dulce de leche “ La Paila” Description of elaboration Process:**

The main ingredient of Dulce de leche is Bovine milk that is produced exclusively on our farm, assuring the tracking of this ingredient starting from the cow up to the final product.

The milk that is used in the elaboration has to attain stringent sanitary and quality parameters that are monitored by the National Animal Health Department (SENASA)

- Free from antibiotics
- Less than 50.000 UFC/gr.
- Storage temperature 4°C
- Less than 100.000 somatic cells

The quality of the milk is the first CCP (critical control point) of our HACCP process. The aforementioned parameters are tested on a daily basis, we also test for butterfat

content and pH. The milk is filtered twice before it reaches the elaboration plant.

From the bulk tanks the milk is pumped to a double wall formulation vat. In this vat the cane sugar is added and also the sodium bicarbonate, that neutralized the natural acidity of the milk, and is vital for the Maillard reaction (caramelisation) to take place.

From this vat, the mixture is filtered (retaining particles of over 500  $\mu$ ) and pumped to the double walled cauldrons that are heated by steam, these cauldrons have a double set of circular where the cooking and concentration process takes place. We can assure a core temperature of 104/105°C during 2 hours.

This thermal process is our second CCP and is monitored twice per batch in order to assure that this temperature is attained. The advantage of dulce de leche is that if both variables (time and temperature) are not fulfilled, the resulting product is not dulce the leche.

Once the product reaches 68/69° Brix, we pump the product to the cooling vat, where once it's temperature drops down to 60/70 °C it flows by gravity to our bottling facility. Previously it passes by a series of sieves and filters that retain particles of 500  $\mu$ . From the cooling vat up to the filled jar, the dulce de leche has no possibility of contamination because it flows in an uninterrupted pipeline.

Our bottling machine is in a room with a controlled environment, the air is filtered, there are constant temperature and relative humidity conditions (20°C/ 45% rel. humidity) and the room is irradiated by UV reactors.

An important item that is monitored automatically is the temperature of the dulce de leche at the moment of bottling. We target a temperature of 70°C, so once the lid is put on a natural vacuum takes place, ensuring us positive closure of the jar.

The closed jars are transported by conveyor belt to the labeling area. Cross-contamination between the bottling and labeling areas is avoided because there is a difference of pressure between them, so air can't pass between areas.

Weight control is monitored at this point, the label and batch number and expiration date are put on the jar automatically.