



SELECTED COFFEE YEASTS

LALCAFÉ™
Express the varietal

FREQUENTLY ASKED QUESTIONS

COFFEE MACERATION BY WET PROCESS & LALCAFÉ™ YEASTS

What is wet process?

Wet process submerges all the pulped coffee beans into clean water. This maceration of coffee beans into water allows two phenomena: good demucilagination of the pulped beans and the revelation of the sensory characters of your coffee beans.

These 2 steps are commonly referred to as fermentation.

What is fermentation?

- Fermentation is a biological process carried out by micro-organisms and mainly yeasts. During the coffee maceration, the LALCAFÉ™ yeasts help firstly to degrade the mucilage from the beans (demucilagination) due to their specific enzymatic activities and secondly to reveal the sensory potential of the beans, due to their specific metabolisms.
- Fermentation has a big impact on the final coffee quality, because it contributes directly to the sensory profile of the coffee. A better fermentation controlled by the addition of the yeast, resulting in better quality product.

Why control the fermentation with LALCAFÉ™ yeasts?

- During the maceration (minimum 12 hours), the LALCAFÉ™ yeasts help to protect the coffee from the growth of undesirable indigenous microflora that can produce spoilage characteristics, defects or simply unwanted flavors.
- With a maceration step in processing, even after the mucilage is removed, LALCAFÉ™ yeasts will help to respect and to reveal the varietal aromas of your coffee beans.

What makes the yeast different?

- Each yeast is unique and has its own metabolism which will impact the demucilagination and the sensory quality.
- LALCAFÉ™ yeasts have been characterized and selected for their capabilities to maintain and improve coffee fermentation and quality during the wet process. Many studies carried out by several research and technical centers recognized by the coffee sector (CIRAD, WASI...) have confirmed the positive impact of selected yeasts on coffee quality.

Why use LALCAFÉ™ yeasts in coffee fermentation?

They will help to:

- Better control the fermentation (avoid over fermentation and bacterial and spoilage indigenous flora contamination),
- Accelerate coffee demucilagination,
- Facilitate washing (reduction in water used),
- Depending on the LALCAFÉ™ yeasts used and the duration of the maceration, they will more or less impact the aroma expression of your coffee. These impacts have been shown on wine, beer and other fermented beverages.

How long is the fermentation for maximum yeasts impact?

- We recommend fermentation duration of 12 to 48h; the optimum is between 24 and 36h to obtain a maximum aromatic expression of LALCAFÉ™ yeasts.
- Even though demucilagination is complete, continued contact may benefit flavor development, LALCAFÉ™ yeasts need more time to reveal the coffee aromas.



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How do I use LALCAFÉ™ yeasts?

- Yeasts are produced in dry form (active dry yeast) to make their transportation and storage easier. They have to be rehydrated before use.
- First, they must be rehydrated in 10 times the volume of water (10 liters for 1kg).
- The rehydration water must be clean (no smell, no chemicals inside), and between 15 and 37°C.
- Stir in gently the yeast into the water to avoid lumps.
- Leave for 20 minutes.

What if lumps are present?

Lumps are formed because yeast was added too quickly or it was too cold. To solve this problem, you should stir again (gently) after 10 minutes of rehydration then let it stand for another 10 minutes to complete the rehydration.

What if I do not see foam?

There is no relationship between foam (which could appear during rehydration) and the fermentation activities of the yeast. This is just a physical phenomenon of CO₂ released which may be trapped by the yeast during the drying process. So, foam does not impact the activity of the rehydrated yeast and they can be inoculated and used for coffee fermentation.

What LALCAFÉ™ dose should I use?

The optimal dosage is 1 g per kg of freshly pulped coffee (1 g per 2 kg of cherries). If the water quality is doubtful, an adjustment of the dosage is required. For example, dirty water (brown color, smell of fermentation, alcohol...) you will need to increase the dosage to 1.5 g per kg.

How and when should the coffee be inoculated?

- Inoculation (adding the yeast for the coffee fermentation) is done just after pulping. How the yeast is added to the fermentation tank is determined by the quantity of coffee to ferment:
 - Up to 1,000 kg: put coffee in the bin then add the yeast at once then stir. The bin must be free of any chemicals or other compounds which could contaminate the coffee.
 - From 1,000 kg to 5,000 kg, split the yeast addition. Add half of the yeast dosage when the tank is half-filled and then add the rest of the yeast addition once the tank is filled.

- Once yeast is rehydrated never leave it at ambient temperature for more than 30 minutes. You should prepare the yeast in function of the filling of the fermentation tank. If a tank takes 4h to be filled and you would like to make 3 inoculations, it will be better to do the yeast rehydration just before each inoculation.

Why should I use a wet process?

- Adding water to cover the coffee has several benefits like reduction of the temperature variation. It also gives a better mixing of the medium which is more favorable for yeast growth.
- It also allows for a better anaerobic fermentation process as water keeps air out.

How much water do I have to add to the tank and at which moment in the process?

- To obtain a complete demucilagination and a good fermentation we recommend doing the fermentation completely under water. It means that once the tank is full of coffee, add enough water to cover it (between 1 and 2 cm above the level of coffee).
- Submerge pulped cherries under water for a more efficient anaerobic fermentation.

Does it need to be clear?

Yes, the water used to submerge the coffee must be as clear as possible. If you are using recycling water, never use water recycled more than two times.

Must I do my fermentation with LALCAFÉ™ yeasts in closed tank?

As we recommend the fermentation under water, you don't need to cover or close your fermentation tank.

May I re-use water of fermentation?

- If you are recycling water, never recycle water more than two times
- If the water quality is doubtful, an adjustment of the dosage is required.
- Towards the end of every fermentation, there is a reduction of the microbial load, it is therefore advisable to inoculate every fermentation.

What happens in case of yeast overdosing?

- Overdosing will have no impact on final coffee quality.
- It will not reduce fermentation time.
- On the other hand, using too low of a yeast dosage will show no difference compared to your normal process or your coffee quality.

How to store the active dry yeast?

- You must keep yeast in a cold and dry place (the best condition is at 4°C). Shelf-life is 2 years for LALCAFÉ CIMA™, 3 years for LALCAFÉ INTENSO™ and 4 years for LALCAFÉ ORO™.
- Avoid storage in hot place (up to 30°C) for more than 6 months.
- Once the bag is opened, use as rapidly as possible (during the following 15 days and it is best to close it and keep it at 4°C away from humidity).

