

LALCocoa Matunda™

by LALLEMAND

Fermentation control

The cocoa fermentation is an essential process in the production of commercial beans for the manufacture of chocolate. It is an entirely biological process, (microbial activity), which can be difficult to achieve properly due to the various current practices. The absence of fermentation control largely explains the inconsistent quality of commercial cocoa beans. After harvesting and opening the pods, the cocoa beans and pulp are kept in boxes or are heaped and fermented for maximum 8 days.

Due to a complex microflora, successive fermentations occur: fermentation, thanks to the yeast activity, acetic and lactic fermentations due to the bacterial activity. During this process, the beans have to be mixed and turned by moving them from a box or heap to another. This will allow the aeration of the matter and a better effectiveness of the fermentation.

This complex fermentation process is crucial because partially fermented cocoa beans are not as valuable as completely fermented beans. The control of these fermentation steps secure and ensure an optimal quality of the cocoa beans.

Our studies on cocoa process showed that controlling the fermentation process by adding specific yeast at the beginning of fermentation, improved the quality of cocoa beans.

LALCOCOA MATUNDA™ yeast has been selected within the *Saccharomyces cerevisiae* species in collaboration with research and technical institutes.

LALCOCOA MATUNDA™ has been selected for its capacity to enhance the fresh fruit aroma and to reduce astringency with a more secure complete fermentation.

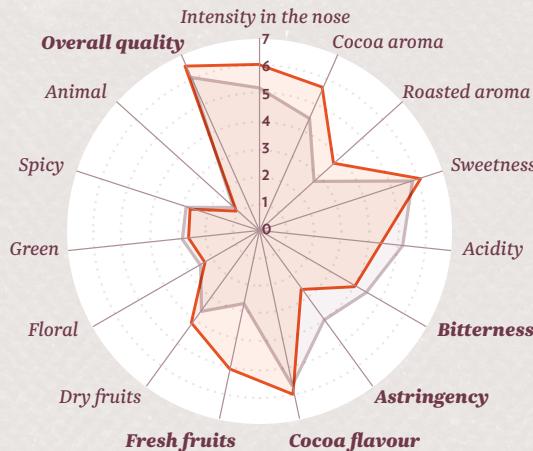
LALCOCOA MATUNDA™ is the result of 4-years of research and many trials performed on cocoa in different mills around the world. The results confirm that LALCOCOA MATUNDA™ is truly suited to manage cocoa fermentation. Its properties are suitable for the conditions under which cocoa fermentation takes place (high temperature, variation of pH) and allow revelation of the cocoa bean quality.

Benefits of LALCOCOA MATUNDA™ yeast

Sensory impact

LALCOCOA MATUNDA™ expresses the fruity aromatic potential and improves the overall quality of the cocoa. The results of trials show that LALCOCOA MATUNDA™ is well suited to better enhance the fresh fruit aroma, reduce astringency and give intense cocoa notes.

Sensory profile (Professional panel)



CONTROL

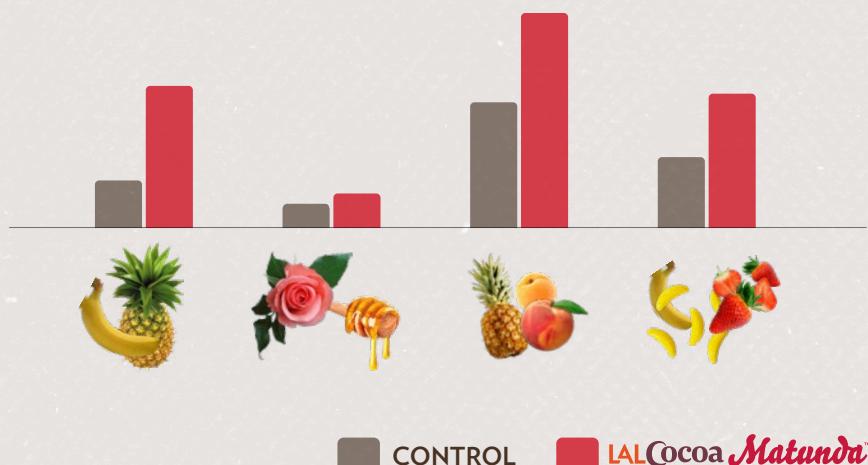
LALCocoa Matunda™

High-expression of fruity notes; less bitterness; less astringency; more cocoa notes and better overall quality.

Trials done June 2017,
fermented beans from
French Guiana

Impact of LALCOCOA MATUNDA™ on esters in Cocoa.

Trial done March 2017, fermented beans from Mexico.

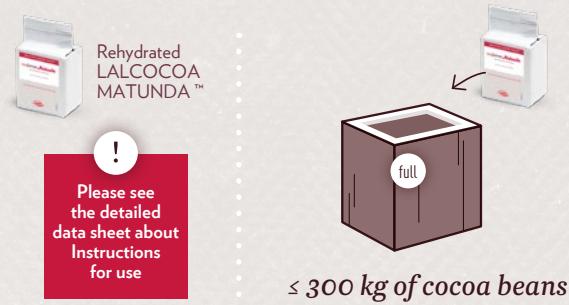


Recommended dosage & instructions for use

Before its addition in the cocoa beans, LALCOCOA MATUNDA™ must be rehydrated in 10 times its weight of clean water between 15 and 37°C (free of chemicals, or organic matters like soap, fats, smell) during 20-30 minutes.

2 g of dry LALCOCOA MATUNDA™ per 1 kg of cocoa beans

After 20-30 minutes of rehydration, add the suspension to the tank of cocoa beans to be fermented during filling in order to ensure the best dispersion of the yeast. Depending on the quantity of beans in the tank, the yeast suspension must be added gradually during the filling of tank to guaranty its good homogeneity.



Packaging and storage conditions



- Available in 500 g pack.
- To be used once opened.
- Only use vacuum-sealed sachet.

Store in the original packaging, in a cool and dry place (<25°C). 2 year shelf-life.

Due to its metabolism, LALCOCOA MATUNDA™ has the capacity to release volatile aromas compounds such as esters that are responsible for fresh fruits, banana and honey notes. **LALCOCOA MATUNDA™ impacts significantly the quantity of esters (2 times more than the control).**

Reliable fermenter

When properly used, LALCOCOA MATUNDA™, due to its specific metabolism, speeds up increase in temperature in the cocoa mass and favors a good acetic fermentation. It also facilitates a more uniform and more complete fermentation compared to a classical process with native microflora. This makes it a strong tool to reduce defects on raw cocoa with a decrease of purple beans and a better control of spoilage micro-organisms risks which can generate undesirable aromas (animal notes, earthy...).

Recommendations

After LALCOCOA MATUNDA™ inoculation:

- Fermentation duration follows the good practice protocol already enforced onsite (with a maximum of 8 days depending on the quantity of mucilage) to achieve a complete fermentation with a good impact on sensory evaluation
- Batches must be aerated by turning cocoa according to the protocol in place, to favor a good microbiota succession

Distributed by

LALCOCOA MATUNDA™ has been selected in collaboration with INRA

December 2018 — The information herein is true and accurate to the best of our knowledge however this data sheet is not to be considered as a guarantee expressed or implied or as a condition of sale of this product