



## Technical Data Sheet

# NOVALAGER

## MODERN HYBRID LAGER YEAST

LalBrew NovaLager™ is a true bottom fermenting *Saccharomyces pastorianus* hybrid from the novel Group III (Renaissance) lineage that has been selected to produce clean lager beers with distinct flavor characteristics and superior fermentation performance. LalBrew NovaLager™ is a robust lager strain with ideal characteristics for lager beer production including fast fermentations, high attenuation and high flocculation. The distinct flavor profile is very clean, slight esters over a wide temperature range. Through expression of a  $\beta$ -glucosidase enzyme, LalBrew NovaLager™ can promote hop biotransformation and accentuate hop flavor and aroma. This product is the result of the research and development work of Renaissance Bioscience Corp. (Vancouver BC, Canada) in partnership with Lallemand Brewing. LalBrew NovaLager™ was selected using classical and non-GMO breeding methods to obtain a novel *Saccharomyces cerevisiae* x *Saccharomyces eubayanus* hybrid strain that defines a novel Group III (Renaissance) lager lineage that is distinct from any other traditional *Saccharomyces pastorianus* strains. This strain is a low VDK/diacetyl producer and utilizes patented technology from the University of California Davis (USA) to ensure that the strain will not produce hydrogen sulfide ( $H_2S$ ) off-flavors, therefore reducing the maturation time associated with lager beer production.



## MICROBIOLOGICAL PROPERTIES

Classified as *Saccharomyces pastorianus*, a bottom fermenting yeast.

Typical Analysis of LalBrew Novalager™ yeast:

<b>Percent solids</b>	93% - 97%
<b>Viability</b>	$\geq 5 \times 10^9$ CFU per gram of dry yeast
<b>Wild Yeast</b>	< 1 per $10^6$ yeast cells
<b>Diastaticus</b>	Negative
<b>Bacteria</b>	< 1 per $10^6$ yeast cells

Finished product is released to the market only after passing a rigorous series of tests

\*See specifications sheet for details



## BREWING PROPERTIES

In Lallemand's Standard Conditions Wort at 12°C (53.6°F) LalBrew NovaLager™ yeast exhibits:

Vigorous fermentation that can be completed in 6 days.

High Attenuation and High Flocculation.

Aroma and flavor is clean with low to medium ester, no sulfur.

This strain is POF negative.

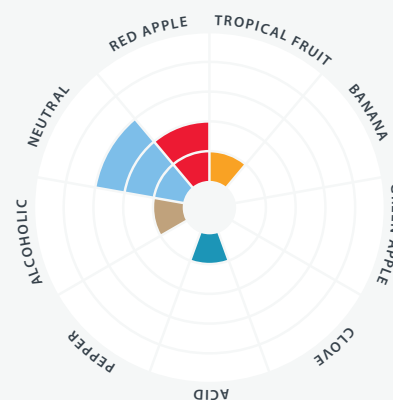
The optimal temperature range for LalBrew NovaLager™ yeast when producing traditional styles is 10 - 20°C (50 - 68°F).

Lag phase, total fermentation time, attenuation and flavor are dependent on pitch rate, yeast handling, fermentation temperature and nutritional quality of the wort.

*If you have questions please do not hesitate to contact us at [brewing@lallemand.com](mailto:brewing@lallemand.com)*



## FLAVOR & AROMA



## QUICK FACTS

### BEER STYLES

Lagers

### AROMA

Clean, low to medium ester, no sulfur

### ATTENUATION RANGE

78 - 84 %

### TEMPERATURE RANGE

10 - 20°C (50 - 68°F)

### FLOCCULATION

High

### ALCOHOL TOLERANCE

13% ABV

### PITCHING RATE

50 - 100g/hL



## Technical Data Sheet

# NOVALAGER MODERN HYBRID LAGER YEAST



## USAGE

The pitch rate will affect the fermentation performance and flavor of the beer. For LalBrew NovaLager™ yeast, a pitch rate of 50 – 100g per hL of wort is sufficient to achieve optimal results for most fermentations. More stressful fermentations such as high gravity, high adjunct or high acidity may require higher pitch rates and additional nutrients to ensure a healthy fermentation.

LalBrew NovaLager™ may be re-pitched just as you would any other type of yeast according to your brewery's SOP for yeast handling. Wort aeration is required when re-pitching dry yeast.



## STORAGE

LalBrew NovaLager™ yeast should be stored in a vacuum sealed package in dry conditions below 4°C (39°F). LalBrew NovaLager™ will rapidly lose activity after exposure to air.

Do not use 500g or 11g packs that have lost vacuum. Opened packs must be re-sealed, stored in dry conditions below 4°C (39°F), and used within 3 days. If the opened package is re-sealed under vacuum immediately after opening, yeast can be stored below 4°C (39°F) until the indicated expiry date. Do not use yeast after expiry date printed on the pack.

Performance is guaranteed when stored correctly and before the expiry date. However, Lallemmand dry brewing yeast is very robust and some strains can tolerate brief periods under sub-optimal conditions.



## DRY PITCHING

Dry pitching is the preferred method of inoculating wort. This method is simpler than rehydration and will give more consistent fermentation performance and reduce the risk of contamination. Simply sprinkle the yeast evenly on the surface of the wort in the fermenter as it is being filled. The motion of the wort filling the fermenter will aid in mixing the yeast into the wort.

For LalBrew NovaLager™, there are no significant differences in fermentation performance when dry pitching compared to rehydration.



## REHYDRATION

Rehydration of yeast prior to pitching should be used only when equipment does not easily facilitate dry pitching. Significant deviations from rehydration protocols can result in longer fermentations, under-attenuation and increased risk of contamination. Rehydration procedures can be found on our website.

Measure the yeast by weight within the recommended pitch rate range. Pitch rate calculators optimized for liquid yeast may result in significant overpitching.



### BREWERS CORNER

For more information on our yeasts including:

- › Technical Documents
- › Best Practices Documents
- › Recipes
- › Pitch Rate Calculator and other brewing tools

Scan this QR code to visit the Brewers Corner on our website.

### CONTACT US

If you have questions, do not hesitate to contact us at [brewing@lallemand.com](mailto:brewing@lallemand.com). We have a team of technical representatives happy to help and guide you in your fermentation journey.

[www.lallemandbrewing.com](http://www.lallemandbrewing.com)  
[brewing@lallemand.com](mailto:brewing@lallemand.com)