Technical Data Sheet

SOURVISIAE®

FOR SOURING DURING PRIMARY FERMENTATION

Sourvisiae® is a bioengineered (GMO) strain of *Saccharomyces cerevisiae* capable of producing lactic acid in addition to alcohol during fermentation. Sourvisiae® contains a single genetic modification, a lactate dehydrogenase gene from a food microorganism, which enables the yeast to produce high levels of lactic acid when used as a pure culture, or lower levels when blended with another brewing yeast strain.

Sourvisiae® allows the brewer to ferment and sour the beer in one simple step, reducing cross-contamination risks, lowering costs and cutting total process time. The brewing process is conducted without any modifications; Sourvisiae® is pitched just like conventional yeast and ferments in a normal fermentation time. Sourvisiae® does not produce other flavor compounds associated with *Brettanomyces*, *Lachancea,* or Lactic Acid Bacteria, providing a cleaner and more consistent and reproducible souring process.

Sourvisiae® is safe, non-hazardous and Generally Recognized as Safe (GRAS) by the US Food and Drug Administration.

MICROBIOLOGICAL PROPERTIES

Classified as a bioengineered (GMO) strain of *Saccharomyces cerevisiae*, a top fermenting yeast.

Typical Analysis of Sourvisiae® Yeast:

Percent solids	93% - 97%
Viability	≥ 5 x 10^9 CFU per gram of dry yeast
Wild Yeast	< 1 per 10^6 yeast cells
Diastaticus	Negative
Bacteria	< 1 per 10^6 yeast cells

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

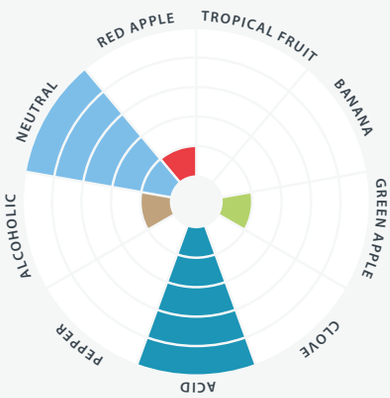
*See specifications sheet for details

USAGE

Brew as normal and inoculate Sourvisiae® into cooled wort just as you would for a standard beer fermentation. For Sourvisiae®, a pitch rate of 50 – 100g per hL is sufficient to achieve optimal results for most fermentations.

Because of the resulting low pH and highly acidic conditions, we do not recommend re-pitching this yeast.

FLAVOR & AROMA



QUICK FACTS

BEER STYLES
Sour ales

AROMA
Tangy, intensely sour, slightly fruity

ATTENUATION RANGE
76 - 82 %

TEMPERATURE RANGE
15 - 22°C (59 - 72°F)

FLOCCULATION
High

ALCOHOL TOLERANCE
12% ABV

PITCHING RATE
50 - 100g/hL

PATENT INFORMATION
Patent pending
PCT/IB2019/051682

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BREWING PROPERTIES

In Lallemand's Standard Sonditions Wort at 20°C (68°F), Sourvisiae® yeast exhibits:

- Vigorous fermentation that can be completed in 4-7 days.
- Medium to High Attenuation and High Flocculation.
- High levels of lactic acid (no acetic acid) with slightly fruity flavor and aroma.
- This strain is POF negative.
- Final pH of 3.0-3.2 and lactic acid concentrations of 8-15g/L.
- The optimal temperature range for Sourvisiae® yeast when producing traditional styles is 15 - 22°C (59 - 72°F).

Attenuation may appear lower due to the formation of lactic acid. Production of lactic acid does not result in a loss of CO_2. When sugar is consumed to produce lactic acid, there is no change in density. Therefore, the amount of residual sugar in the finished beer is lower than the final density would imply.

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

STORAGE

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

Do not use 500g or 10g 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 printed on the pack. Do not use yeast after expiry date printed on the pack.

Performance is guaranteed when stored correctly and before the expiry date. However, Lallemand 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 Sourvisiae® 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**. We have a team of technical representatives happy to help and guide you in your fermentation journey.

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