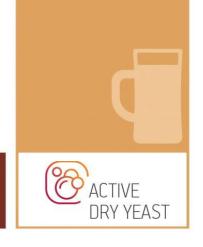




SafLager™ S-189



A GREAT YEAST FOR ELEGANT LAGERS WITH FLORAL NOTES

Originating from the Hürlimann brewery in Switzerland. This lager strain's profile allows to brew fairly neutral flavor beers with a high drinkability. Depending on the conditions, it tends to present noticeable herbal and floral notes to lager beers.

Ingredients:

Yeast (Saccharomyces pastorianus), emulsifier: monostearate sorbitan (E/INS 491)

Total esters low

Total superior alcohols low

Apparent attenuation 80-84%

Flocculation

Sedimentation fast

Experimental conditions: standard wort in EBC tube at 18°P at 12°C/53,6°F° during the first 48h of fermentation then 14°C/57,2°F.

Fermentis dry brewing yeasts are well known for their ability to produce a large variety of beer styles. In order to compare our strains, we ran fermentation trials in laboratory conditions with a standard wort for all the strains and standard temperature conditions (SafLager: 12°C/53,6°F for 48h then 14°C/57,2°F / SafAle: 20°C/68°F). We focused on the following parameters: Alcohol production, residual sugars, flocculation and fermentation kinetic.

Given the impact of yeast of the quality of the final beer it is recommended to respect the recommended fermentation instructions. We strongly advise users to make fermentation trials before any commercial usage of our products.

Fermentation temperature: Ideally at 12-18°C (53.6-64.4°F)



Pitching: Lesaffre know-how and continuous yeast production process improvement generates an exceptional quality of dry yeasts able to resist to a very wide range of uses, incl. cold or no rehydration conditions, without affecting their viability, kinetic and/or analytical profile. Brewers can choose usage conditions that fit the best their needs:

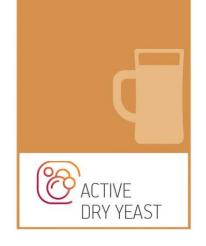
With our E2UTM label, you have the choice: you can rehydrate, or you can pitch directly; depending on your equipment, habits and feelings.

Direct Pitching

Pitch the yeast directly in the fermentation vessel on the surface of the wort at or above the fermentation temperature. Progressively sprinkle the dry yeast into the wort ensuring the yeast covers all the surface of wort available to avoid clumps. Ideally, the yeast will be added during the first part of the filling of the vessel; in which case hydration can be done at wort temperature higher than fermentation temperature, the fermenter being then filled with wort at lower temperature to bring the entire wort temperature at fermentation temperature.







With prior rehydration

Alternatively, sprinkle the yeast in minimum 10 times its weight of sterile water or boiled and hopped wort at 25 to 29°C (77°F to 84°F). Leave to rest 15 to 30 minutes, gently stir and pitch the resultant cream into the fermentation vessel.

Dosage:

80 to 120 g/hl for fermentation at 12°C-18°C / 0,11 to 0,16 oz/gal for fermentation at 53.6-64.4°F. Increase pitching for fermentation lower than 12°C/53°F up to 200 to 300 g/hl at 9°C (up to 0,27 to 0,40 oz/gal at 48°F).

Typical analysis:

- Viable yeast > $6.0 *10^9 \text{ cfu/g}$
- Purity: > 99.999 %
- Lactic acid bacteria: < 1 cfu /6.0*10⁶ yeast cell
- Acetic acid bacteria: < 1 cfu /6.0*106 yeast cell
- Pediococcus: < 1 cfu /6.0*10⁶ yeast cell
- Total Bacteria: < 1 cfu /10⁶ yeast cell
- "Wild" Yeast¹: < 1 cfu /6*10⁶ yeast cell
- Pathogenic micro-organisms: in accordance with regulation
 - ^{1.} EBC Analytica 4.2.6 ASBC Microbiological Control-5D

Storage:

The product must be stored/transported in dry conditions and protected from direct heat sources (e.g. sunlight, ...). For up to 6 months, the product can be stored/transported at ambient temperature below 25°C/77°F without affecting its performances. Peaks up to 40°C/104°F are allowed for a limited period of time (less than 7 days in total). For prolonged storage times (beyond 6 months) after product has arrived at final destination, Fermentis recommends storage at a controlled temperature (below 15°C/59°F).

Shelf life:

36 months from production date. Refer to best before end date printed on the sachet. Opened sachets must be sealed and stored at 4°C (39°F) and used within 7 days of opening. Do not use soft or damaged sachets.