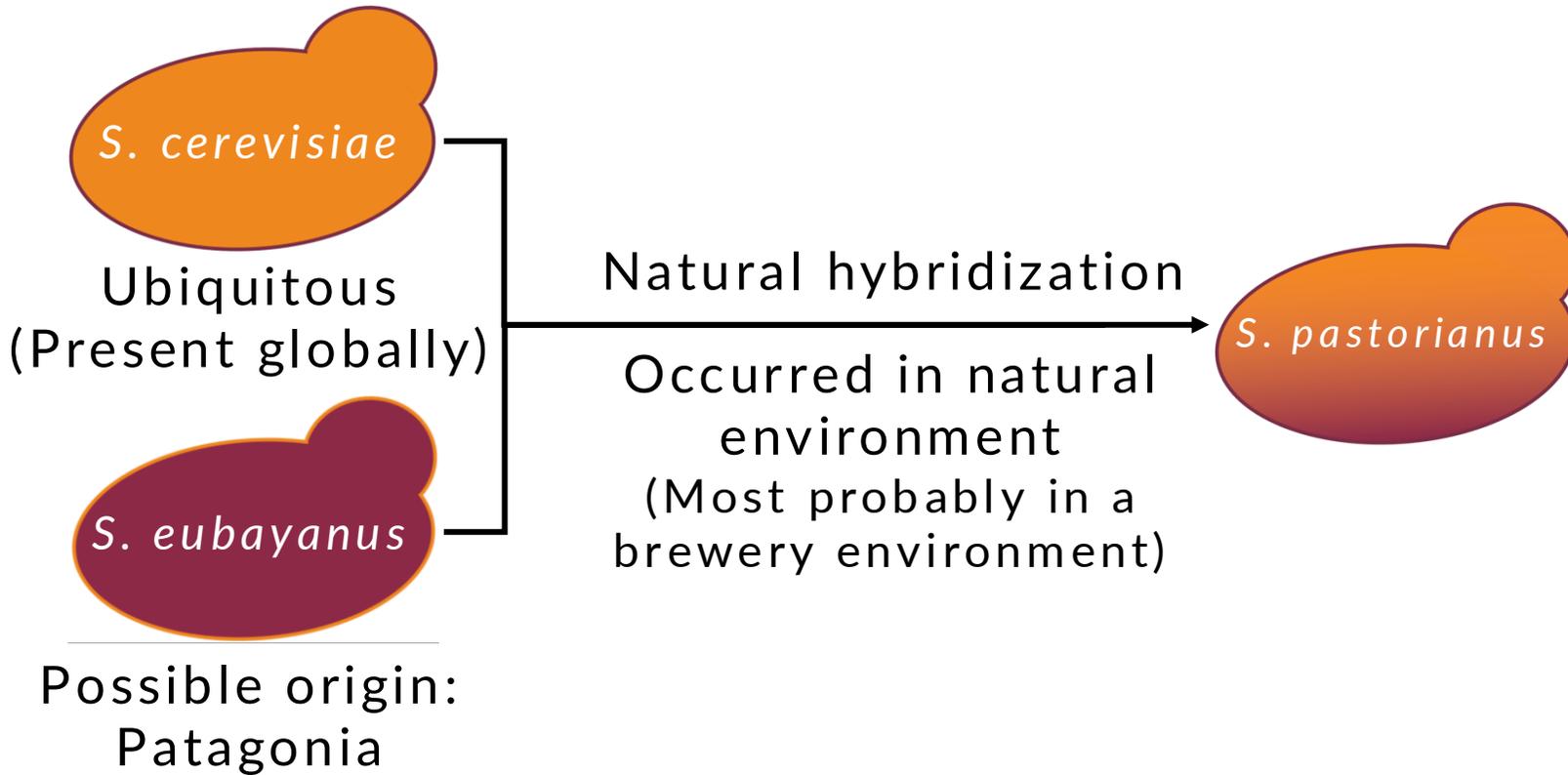




Dry yeast, a key lever of style innovation for Lagers

What is *Saccharomyces pastorianus*?

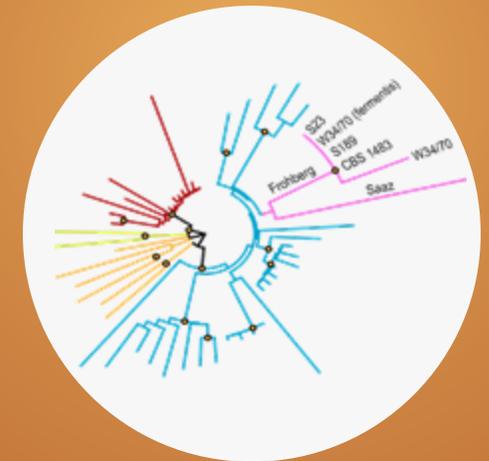
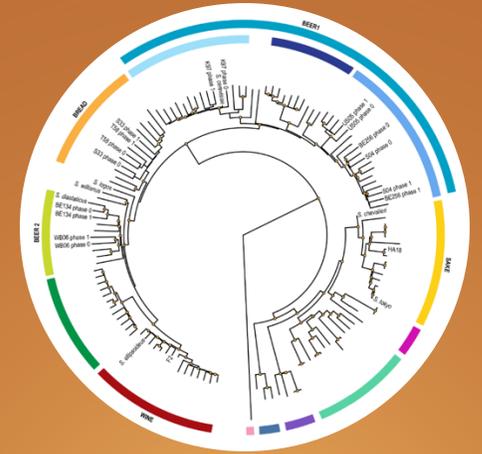
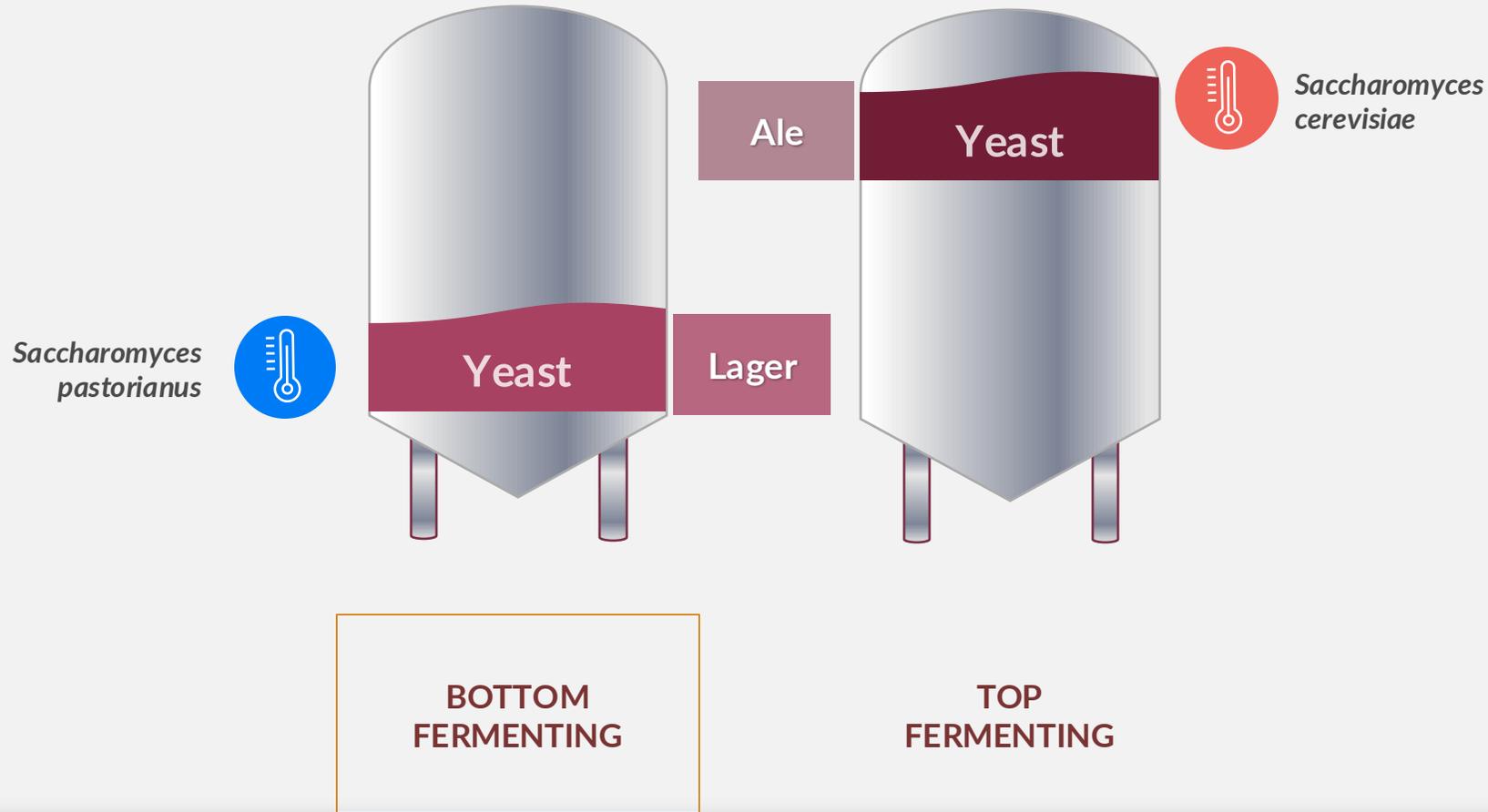
An interspecies *Hybrid* = When 2 different species breed and give an offspring



Main properties:

- Ability to ferment at low temperatures
- Maltotriose positive
- Melibiose positive
- POF negative
- Sedimentation: fast

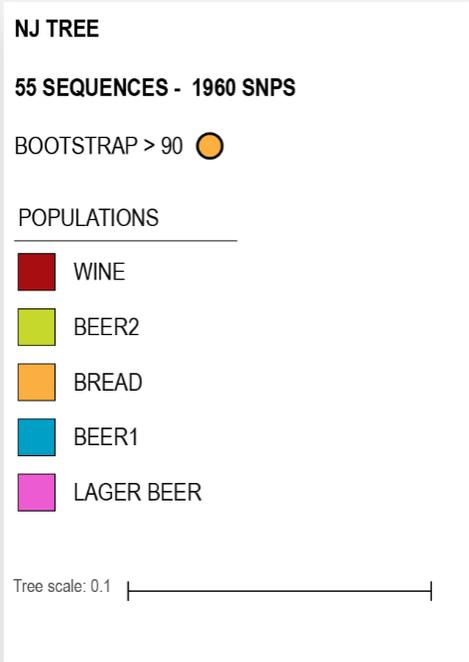
EXPLORE FURTHER Classical Beer Yeasts



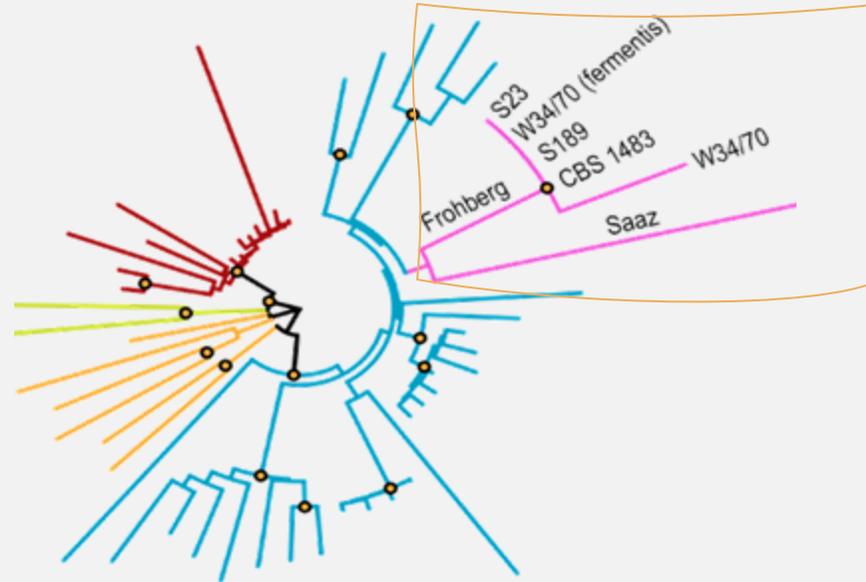
■ BEER1
■ LAGER BEER

Phylogenetic placement of Lager beer strains

(Fermentis genomic yeast analysis 2017)



SACCHAROMYCES PASTORIANUS



Lager Strains

Generally, all strains of *S. pastorianus* exhibit **minimal** genomic variation.

Two Lager Phylogenetic Families

Frohberg and Saaz are the two lager phylogenetic families existing.

SafLager™ W-34/70, SafLager™ S-23 and SafLager™ S-189 come from FROHBERG type

Figure 3. Phylogeny constructed using the *cerevisiae* sub-genome of *S. pastorianus* and depicting the placement of *Fermentis S. pastorianus* strains S-23, S-189 and W-34/70. The tree was constructed using the Neighbor-joining method. Support values from bootstrap replicates above 90% are shown. The analysis includes representatives of different types of beer starter cultures and wine strains. Note that for lager strains, the two types Frohberg and Saaz are depicted.

A unique variety of dry Lager yeasts

Because each brewer and homebrewer now wants to create a unique lager recipe, we're proud to offer **the most extended range of dry lager fermentation solutions on the market.**

In combination with **versatile character** which has always define Fermentis products, this range of products allow you to develop almost all **lager recipes YOU WANT.** And it's just the beginning of the journey as our R&D team is always working on new fermentation solutions.



Fermentis Lager solutions

SafLager™
S-23



SafLager™
S-189



SafLager™
W-34/70



SafLager™
E-30



SafLager™
SH-45



SafBrew™
LD-20



About the Lager range

Direct Pitch - E2U™ reminder

Four out of five products we have in our range are certified **E2U™ (Easy To Use)** meaning that you can pitch directly in your wort, we **guaranty you the same results in terms of kinetics and aromatics.**

The fifth product, SafBrew™ LD-20, is an **All-In-One™** product, “all in one” because it consists in a mix of **50% yeast and 50% enzyme.** You can still pitch direct if you want, you’ll still obtain great results but because of the pulverulence of the enzyme, we can’t label this product E2U™.

Note that these brands are **utility brands**, they bring an **added value to the products**, but they should not be at the center of your communication.



SafLager™ W-34/70

- ❑ Probably the **most popular**, and the most used at the same time, Lager yeast in the world. Its **renown speaks for itself!**
- ❑ Known for producing **clean and neutral** flavors, allowing the malt and hop characteristics to shine. Ideal for a wide range of lager styles, including American Lager, Helles, Czech Pilsner and many more.
- ❑ **Expanded fermentation temperature tolerance** allowing homebrewers & brewers greater **flexibility** in their brewing practices, enabling the production of crisp and flavorful lagers even in warmer fermentation conditions **up to 20°C (68°F)**



SafLager™ E-30

- ❑ Explore the **ester dimension** of Lagers by crafting more aromatic and fruit forward beers. It brings the isoamyl acetate (compound responsible of the banana notes) at a level just above the threshold bringing this **little twist** to your Lager.
- ❑ This yeast has been selected in **Southeast Asia** based on the expectations of this market and sensory analysis. It's a good yeast to replicate Lager styles appreciated in Vietnam, Thailand, Singapore like **Rice Lagers** is a very good point to promote the SafLager™ E-30.



SafLager™ S-23

- ❑ This yeast strain is a **versatile choice** suitable for a wide range of lager styles. It ferments clean and produces a **crisp**, well-balanced lager with a moderate level of sulfur compounds, which are typical for many traditional lager styles
- ❑ Produces a clean, crisp, and refreshing lager with **slightly more esters and floral notes** compared to SafLager™ W-34/70. Often used for Pilsners and Helles.
- ❑ This yeast strain is a good option for all the styles we could put in the category “**old world lagers**”, especially German and Czech traditional lagers.



SafLager™ S-189

- ❑ SafLager™ S-189 is prized for its ability to enhance other raw materials aromas, making it an excellent choice for **hop-forward lager styles** of the “new world”.
- ❑ This versatile yeast enhances malt character in your beer and has the capacity to **boost hop aromas**, making them more detectable in the final beer. It's a top choice not only for Märzen and Bocks but also for hoppy forward lager styles like India Pale Lager.
- ❑ This yeast has good capacity to **interact and enhance other raw materials**. Depending the matrix, you could obtain floral or fruity notes.



SafBrew™ LD-20

- ❑ SafBrew™ LD-20 is an “**out of the box**” product allowing you to experiment with the traditional lager styles. Its **dry character** is definitely something to consider, it'll allow you to brew **very drinkable beers** making of this product a very good candidate to produce session lagers for example.
- ❑ Its **neutrality** and its capacity to **ferment at higher temperatures** makes of SafBrew™ LD-20 an interesting option for Cold IPAs. With the enzyme in the equation, it's also an interesting option for American Adjuncts Lager.
- ❑ The full beer recipe must be adjusted with SafBrew™ LD-20, indeed by using this product, characteristics of other ingredients could be **overexpressed**: sweetness, bitterness, aromatics, etc. Quantity of hops or malts can be slightly reduced.



SafLager™ SH-45

Coming soon!

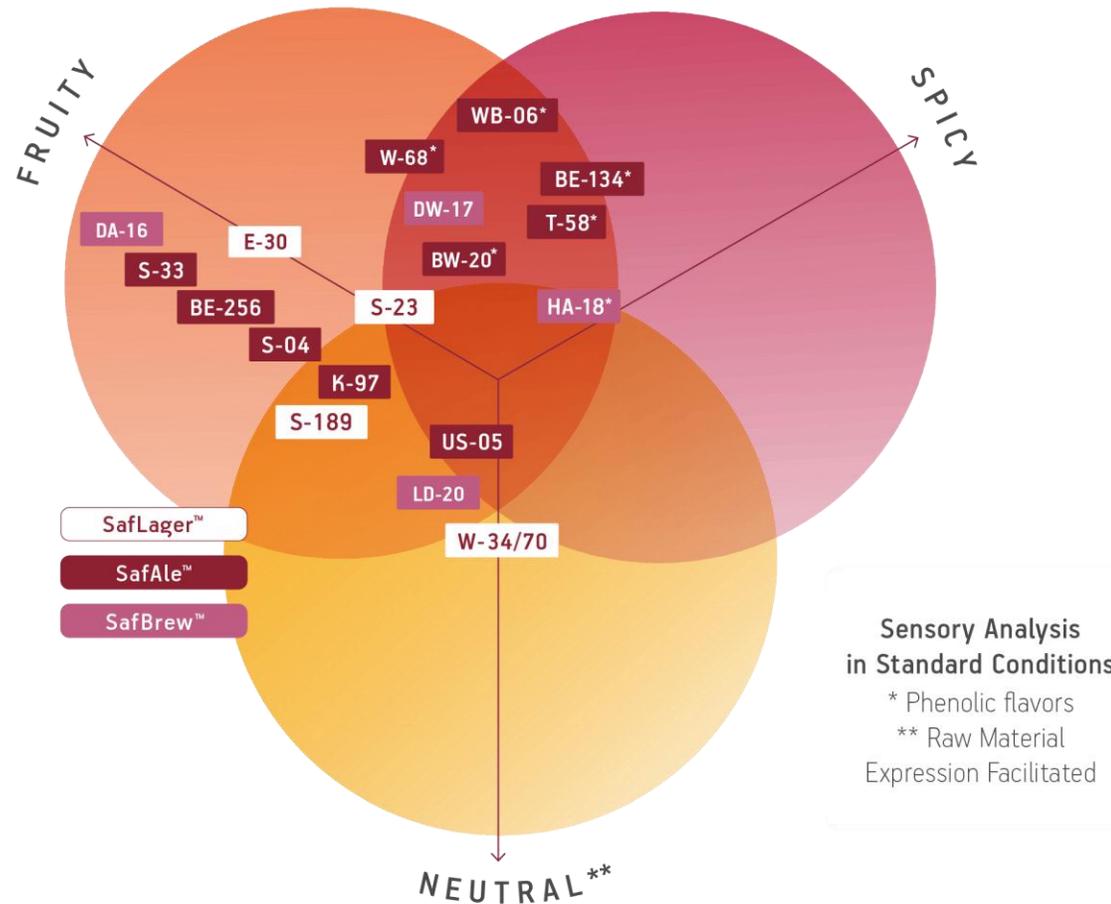
- ❑ Reinforce our offer on the **trendy market of Lagers** by offering multiple dry yeast options for brewers & homebrewers worldwide.
- ❑ After pushing the cursor on the fruity side with the SafLager™ E-30, we push it the other way around with SafLager™ SH-45. You'll be able to release and esterify a maximum of perceivable **thiols** in your beer thanks to the yeast **biotransformation** capacities.
- ❑ As a result, beers crafted with SafLager™ SH-45 may present enhanced levels of fruitiness with intensified **citrus** and **tropical** notes making of it an excellent ally to produce any kind of hoppy lagers such as **New-Zealand Pilsner**.



Fermentis Lager Yeast Range

 Product	 Description	 Aromatic Profile	 Typical Beer Style
SafLager™ W-34/70	<i>S. pastorianus</i>	Neutral	The famous, reliable & neutral yeast for your lager beers
SafLager™ S-189	<i>S. pastorianus</i>	Medium-low fruity/estery and Floral	A great yeast for elegant lagers with noble hop or floral notes
SafLager™ S-23	<i>S. pastorianus</i>	Medium-low fruity/estery	The perfect yeast for slightly fruity/estery lagers
SafLager™ E-30	<i>S. pastorianus</i>	Medium-high fruity/estery	The optimal yeast to produce fruity/estery of lager
SafLager™ SH-45	<i>S. pastorianus</i>	Medium-fruity/estery And thiols bio-transformation	The optimal yeast to produce Thiol forward lagers
SafBrew™ LD-20	<i>S. Pastorianus</i> + AMG enzyme	Low-fruity/estery	Highly attenuated (i.e. dry) lager beers and session beer styles

Sensory placement* of Fermentis beer strains



*Schematical spatial view

Few Recommendations for Specialty & Traditional Lagers



- **Hop flavors** are distinct in different beers recipes, while **SafLager™ S-189** and **SafLager™ E-30** will pronounce better this characters.
- **SafLager™ S-23** and **SafLager™ W-34/70** emphasized both **black and general malt attributes**.
- Supplementary **fruity notes** was showed when using **SafLager™ E-30** and evident when using **SafBrew™ LD-20** - in addition to higher level of **dryness** and a reduced carb profile.



Think to download our App' for more information
about our Lager solutions and it's time for your
questions now!

