SELECTYS® THIOL

Freshness · INNOVATION OENOFRANCE · UE Usable in organic · NOP Usable in organic · Vegan · Allergen Free

A strain selected to enhance the release of thiols in white and rosé wines.

CHARACTERISTICS

SELECTYS® THIOL is a *Saccharomyces cerevisiae* strain isolated in Italy and selected for the presence of two long alleles of the *IRC7* gene coding for the synthesis of the protein linked to thiol expression.

After three years of trials in wine-growing regions renowned for producing wines with a thiol-driven character, **OENOFRANCE®** confirmed this strain's ability to enhance aromas associated with thiols:

- **4MMP** (4-Mercapto-4-methylpentan-2-one): boxwood, broom, blackcurrant bud, tomato leaf
- **3MH** (3-Mercaptohexan-1-ol): passion fruit, pineapple, grapefruit
- **A3MH** (3-Mercaptohexyl acetate): ripe tropical fruits (mango, guava), citrus zest

SELECTYS® THIOL optimizes the release of thiols, resulting in more intense and complex profiles with greater longevity.

Technical Point

The *IRC7* gene and thiols

Thiol precursors are naturally present in grape berries in the form of odorless cysteine- or glutathione-containing compounds.

The beta-lyase enzyme, encoded by the *IRC7* gene in the yeast genome, **catalyzes the conversion of these sulfur-containing precursors into volatile thiols**. This thiol lysis step, which occurs during alcoholic fermentation, is crucial for releasing aromatic thiol molecules, such as 3MH and 4MMP, which contribute to the characteristic aromas of wines.

In short, **the *IRC7* gene and its enzymatic product play a key role in the biosynthesis and release of the aromatic precursors of thiol molecules** in yeast, thereby influencing the aromas of wines.

OENOLOGICAL PROPERTIES

Fermentation kinetics	Killer factor	Recommended AF temperature (°C) for thiols	Ethanol resistance	Glycerol production	SO_2 production	Volatile acidity production	H_2S production	Sensitivity to copper	Nitrogen requirements
Fast	K1 killer	16–18°C	Up to 14.5% vol.	Medium 5.7 g/L	Low to medium	Low	Low	High	Low to medium

SELECTYS® THIOL's nutritional requirements are low to medium. However, we recommend appropriate amino acid nutrition at the start of fermentation to enhance the desired aromatic profile. The addition of organic nitrogen prevents the synthesis of permeases—which enable the assimilation of precursors—from being blocked by the repression caused by the assimilation of NH_4^+ by the NCR system.

TEST RESULTS

REVELATION OF AROMAS

SELECTYS® THIOL enables the **release of more thiol radicals from precursor molecules** and results in significantly higher concentrations of volatile thiols (4MMP, 3MH, A3MH) in wines compared to wines made with yeast strains lacking the two long alleles of the *IRC7* gene (Figure 1).

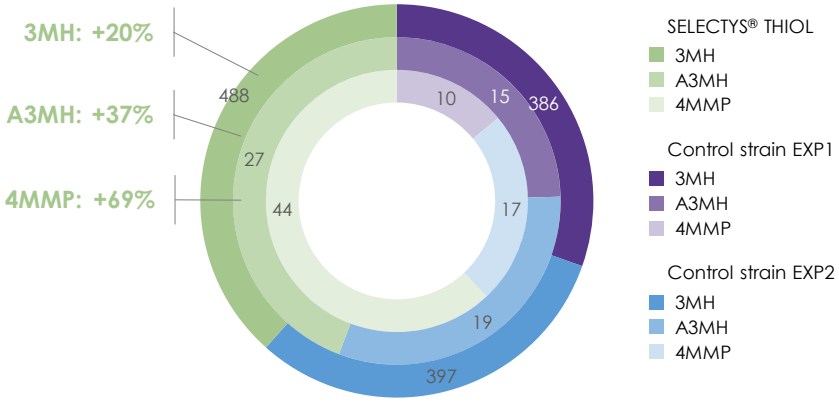

Figure 1. Thiol concentrations (µg/L) measured in Sauvignon Blanc wines produced with **SELECTYS® THIOL** or control strains possessing two short alleles of the *IRC7* gene. Dose used = 20 g/hL.

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APPLICATIONS

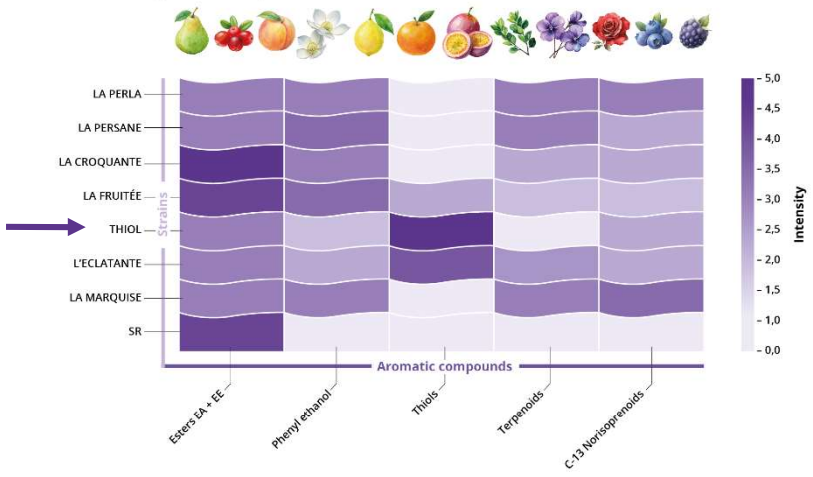
Ideal for producing **fresh white and rosé wines** with **very intense thiol aromas**. Full-bodied and well balanced on the palate.

Ensures **safe fermentation** with consistent kinetics.

Suitable for the fermentation of all grape **varieties with "thiol" potential**.

AROMATIC PROFILE

Aromatic profiles of yeast strains for white and rosé wines from the SELECTYS® range.



A WORD FROM THE OENOLOGIST

SELECTYS® THIOL produces white and rosé wines with higher levels of thiols, greater complexity and aromatic freshness. Regardless of the vintage or level of ripeness, this strain stands out for its citrus aromas (pink grapefruit) and the full-bodied mouthfeel it imparts.

Clémence HERAULT
Loire Valley Manager
SOFRALAB® Group

INSTRUCTIONS FOR USE

Rehydration:
Rehydrate the yeast in 10 times its volume of water at a temperature of 37° C (± 2° C). Let stand for 10 minutes, then stir gently until the mixture is uniform. Wait another 10 minutes and stir. Gradually add must to the rehydrated yeast to reduce the temperature difference between the mixture and the tank to be inoculated. When inoculating, the difference in temperature between the preparation and the must should not exceed 5–7° C.

Inoculation:
Pour the solution into the must and mix thoroughly.

Technical Information:
To fully develop a thiol aroma profile, we recommend monitoring the copper content in the must. In effect, **SELECTYS® THIOL** is a strain that is highly sensitive to copper. Levels ≥ 0.5 mg/L may affect the strain's fermentation performance, as well as limit the quantity of thiol aromas released by the strain, as these aromas irreversibly bind to copper and precipitate.

When copper levels in the must exceed 0.5 mg/L, we recommend using **DIWINE® THIOL**.

Precautions for use:
This product is for enological and professional use only.
Use in accordance with current regulations.

DOSAGE

Yeasting of white and rosé must:
20 g/hL

PACKAGING

500 g and 10 kg

STORAGE

Store in the original packaging in a cool, dry place, below 16° C if possible.
Use immediately after opening.

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