

SPECTRA® THIOL

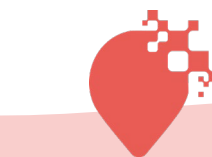
Enzyme preparation specifically for extracting aromatic precursors from grapes.



CHARACTERISTICS

SPECTRA® THIOL is a liquid enzyme preparation **rich in pectolytic and secondary enzymatic activities** necessary for the weakening of the pectocellulosic wall of the grape cells. This "destructuring" will facilitate the release of all the aromatic precursors contained in these cells.

Combining **SPECTRA® THIOL** with a thiol-releasing yeast carrying 2 long alleles of the *IRC7* gene coding for β -lyase production, such as **SELECTYS® THIOL**, will increase the aromatic potential.



TECH POINT

THE IMPACT OF HEAVY METALS ON THIOLS

It is crucial to control oxidation phenomena at every stage of the wine-making process in order to preserve the longevity of the aromatic compounds. In must, it is particularly important to **monitor copper levels**, as this element is essential for polyphenol oxidases to catalyse oxidation reactions. If the copper concentration exceeds 1 mg/L, it should be **reduced to under 0.5 mg/L** to limit its impact on aromatic compounds. This is particularly true for thiols, whose **-SH function reacts directly with copper, causing them to precipitate**. **PVP/PVI-based** formulations such as **DIWINE® THIOL** enable **heavy metals to precipitate**, thereby preserving thiols.

OENOLOGICAL PROPERTIES

Selected on the basis of specific criteria, **SPECTRA® THIOL** is able to work at low temperatures and helps to break down plant cell walls in order to optimise the release of aromatic precursors.

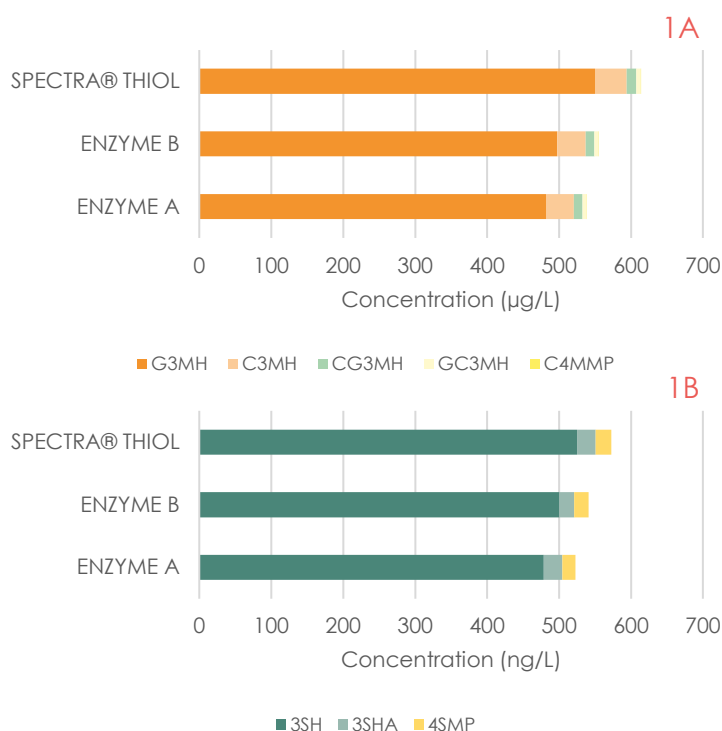
TEST RESULTS

1 - RELEASING PRECURSORS AND ENHANCING AROMAS

The enzymatic activities of **SPECTRA® THIOL** increase the **release of varietal aroma precursors** such as thiols, even **at low temperatures** like those used in cold stabulation (Figure 1A). Once extracted, the aroma precursors must be **protected and revealed** in order to obtain **higher concentrations of volatile thiols** (Figure 1B).

Figure 1A. Concentrations of thiol precursors measured in white musts after stabulation at 4°C for 6 days and treated, or not, with SPECTRA® THIOL.

Figure 1B. Volatile thiol concentrations measured in wines after cold stabulation and an optimised fermentation itinerary.



2 - SENSORY PROFILE OF THE WINES OBTAINED

SPECTRA® THIOL, used in synergy with a thiol-revealing yeast strain, **maximises the variety's aromatic potential** and produces wines with a **fresh, fruity 'thiol' profile** (Figure 2).

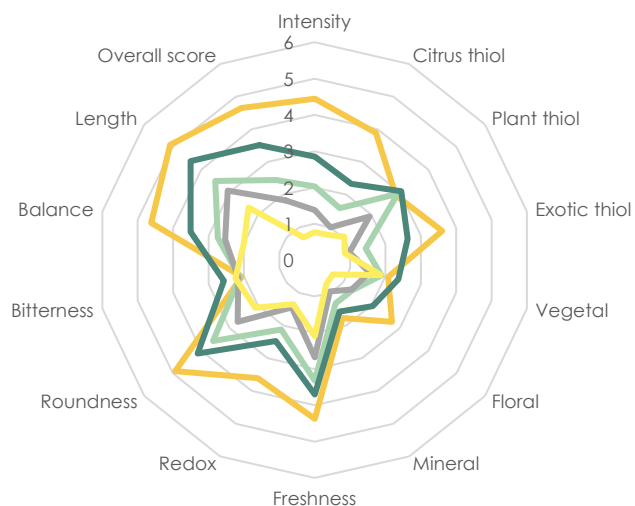


Figure 2. Organoleptic profiles of wines that have undergone a complete 'thiol' process, including SPECTRA® THIOL or another enzyme preparation.

— SPECTRA® THIOL — Enzyme B — Enzyme D
— Enzyme A — Enzyme C

INSTRUCTIONS FOR USE

Implementation:

Dilute **SPECTRA® THIOL** in 10 times its weight in water if necessary for the proper diffusion of the enzyme in the volume to be treated.

Technical information:

- **Skin maceration:** Recommended contact time of 6 to 12 hours before pressing at a temperature of 10 to 14° C.
- **Stabulation:** Recommended contact time of 5 days at a temperature of 4 to 8° C.

DOSAGE

Recommended dose:

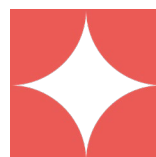
2 to 4 mL/hL

PACKAGING

100 mL and 1 L bottles.

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APPLICATIONS



Optimises the **extraction phase** during cold stabulation on fine lees.



Optimises the **release of the grape's aromatic precursors**, including **thiols**.



Proven effectiveness at low temperatures: 4-8° C



Reduces the time of cold stabulation, and therefore saves energy.



OENOLOGIST'S ADVICE

The use of **SPECTRA® THIOL** has enabled us to reduce stabulation time with our Grenache rosés by 3 days. This enzyme preparation is not only effective in releasing more aroma precursors, it also results in real energy savings.

Fabien DEGIOANNI, oenologist,
OENOLYSE LABORATOIRE D. PERALDI

Precautions for use:

It is recommended that copper levels be measured before stabulation to prevent precipitation of thiol-type aromas. For [Cu] levels > 0.5 mg/L, use **DIWINE® THIOL** at 20 g/hL to chelate the copper molecules and cause them to precipitate in order to preserve the aromatic precursors.

STORAGE

Store unopened, sealed packages immediately upon receiving them at 8° C to 15° C, away from light and in a dry, odour-free environment. Do not allow to freeze. Once opened, store at 8° C to 15° C, do not allow to freeze and use up promptly.