ZENITH® IN-HOUSE TESTING

A Detailed Guide to In-House Zenith Testing for Red Wines

Red wines can be unstable for both color and tartrates. Zenith Color is comprised of a filterable gum Arabic and potassium polyaspartate which act synergistically to stabilize both tartrates and color. To verify that wines require Zenith Color, simple testing is recommended. The timeline for this testing can be seen below:

4-8 weeks before bottling

- Blending
- Acid adjustments
- Fining
- Clarification
- Concentrate trials

3-4 weeks before bottling

- **Zenith Color Panel testing** (following pages)
- Order Zenith

1-2 days before bottling

- Add Zenith Color to wine

Revision: Sept 2022

Enartis USA Inc.
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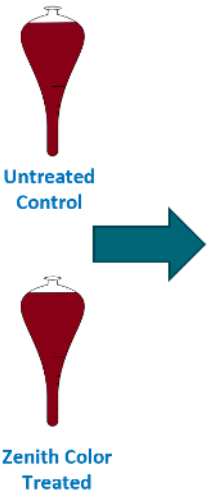
ZENITH COLOR PANEL

Timing: 3-4 weeks prior to bottling

A Zenith Color Panel is a set of analyses required to ensure your wine is compatible with Zenith. This panel verifies the recommended dosage of Zenith Color (200 mL/hL) will stabilize both tartrates and color.

OVERVIEW



Part 1 : COLOR STABILITY

24 hours at -4 C, observe for color precipitate

Trial result	Conclusion
Control Stable & Zenith Stable	Wine is color stable, but may still need Zenith Color. Proceed with cold hold
Control Unstable & Zenith Stable	Wine is color unstable, and will need Zenith Color addition, proceed with cold hold
Control Unstable & Zenith Unstable	Wine is VERY color unstable, repeat part 1 with treatment of Zenith Color (200 mL/hL) AND Maxigum F (200 mL/hL)

Part 2 : TARTRATE STABILITY

6 days at -4 C, observe for tartrate/color precipitate

Trial result	Conclusion
Control Stable & Zenith Stable	Wine is fully stable, no treatment required
Control Unstable & Zenith Stable	Wine can be stabilized with Zenith Color at treated dosage
Control Unstable & Zenith Unstable	Wine is VERY tartrate unstable, call Enartis for further recommendations

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ZENITH COLOR PANEL

Part 2. Color Stability (24-hour cold hold)

Color stability is tested by comparing untreated and treated samples placed in a -4°C freezer for 24 hours. Presence of precipitate, either color or tartrate, indicates the wine is unstable.

Equipment needed:

- At least two conical tartrate stability flasks
- Wine lab filtration device
- Refrigerator (or freezer) that can be set to -4°C
- Parafilm
- Flask holder (test tube tray works)
- Micropipette or small glass pipette

1. Filter wine to less than 2 NTU, parse 100 mL of wine into two labeled conical stability flasks.
   (Control, Zenith Color)
   Optional: Measure initial absorbance at 420, 520, & 620 to be able to quantify color losses.
2. Dose Zenith labeled flask with desired dosage of Zenith Color. Cover both flask tops with parafilm.
3. Place the flasks in refrigerator/freezer set to -4°C for 24 hours.
4. Remove from refrigerator after 24 hours, observe for color in flask, presence of color indicates the wine is unstable.
   Optional: Measure final absorbance at 420, 520, & 620 to calculate color losses. Subtract the initial color from final color to calculate your losses.

Wine is Stable

Wine is unstable

ZENITH COLOR PANEL

Part 2. Tartrate Stability (6-day cold hold)

Cold stability is tested by comparing untreated and treated samples placed in a -4°C freezer for 6 days. Presence of precipitate, either color or tartrate, indicates the wine is unstable.

1. After the 24-hour cold hold for color testing is complete, place flasks back into -4°C freezer for an additional 5 days.
2. Remove flasks after 5 days and allow to come to room temperature. The presence of precipitate indicates wine is unstable.

Have more questions? We're here to help!

Contact the Enartis USA technical line (707) 838-6312
or checkout our video on Zenith Color testing and application.

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