

Techniques for Optimizing Wine Aromas

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optimize

[*op-tuh-mahyz*]

[SHOW IPA](#)



See synonyms for: [optimize](#) / [optimized](#) on [Thesaurus.com](#)



Middle School Level

verb (used with object), op-ti-mized, op-ti-miz-ing.

- 1 to make as effective, perfect, or useful as possible.
- 2 to make the best of.

What do we mean by “Aromatic Optimization?”

- Identifying critical and desirable aromatic compounds for the specific wine and leveraging techniques in the winery to amplify and preserve them
- Identifying obscuring and/or unpleasant aromatic compounds that may arise and taking steps to prevent, limit, or remove them
- Understanding how, when, and why to act, and the downstream effects of these actions

Factors to Consider for Aromatic Optimization

- Varietal typicality and associated aromatic compounds
- Stylistic aims of finished product
- Understand that there are both positive and negative examples of each type of aromatic compound in wine
 - Courting positive aromas may create conditions for negative aromas of the same type to arise
 - Treating wine to remove negative aromas may also result in loss of positive aromas of the same type
- Harvest parameters, fruit processing, fermentation, and aging strategy may all be leveraged to generate, reveal, and safeguard aromatic compounds

Factors to Consider for Aromatic Optimization

- Sensory thresholds are moving targets
- Some powerful aromatic compounds can have a masking effect on less aromatic components

Common Aromatic Compounds in Wine

- Esters
- Norisoprenoids
- Reduced Sulfur Compounds/Thiols
- Terpenes
- Aldehydes
- Phenols
- Pyrazines
- Ketones

Where Do Wine Aromas Originate?

- Grapes
- Fermentation
- Bulk Aging
- Packaging
- Spoilage

Aromatic Optimization in the Vineyard

- Management for aromatic optimization should be tailored to grape variety, vineyard conditions
- Vine balance, fruit health are paramount
- When possible, picking decisions should be based more on flavor/aroma than numbers
- Stylistic goals for wine may shift ideal harvest parameters
- Hand vs Machine picking may affect aromatic parameters



Fruit Processing for Aromatic Optimization

White Wines

- Crush/press strategy directly affects aromatic potential
 - Skin contact/cold soak
 - Press fractions
 - Hyper-oxidation
 - Stabulation
 - Juice settling



Fruit Processing for Aromatic Optimization

Red Wines



- Crush protocol directly influences concentration of aromatic precursors
 - Whole-cluster, whole-berry fermentation produce different aromatics than traditional crush
- Crush additions have effect as well

Fermentation Parameters Affecting Aroma

- Yeast strain selection
- Fermentation temperature
- Yeast nutrition
- Oxygen/CO₂ management
- MLF



Bulk Aging Parameters Affecting Aroma

- Vessel type
- Lees contact
- Enzyme use
- Aging time
- Oxygen Management
 - SO₂
- Hygiene



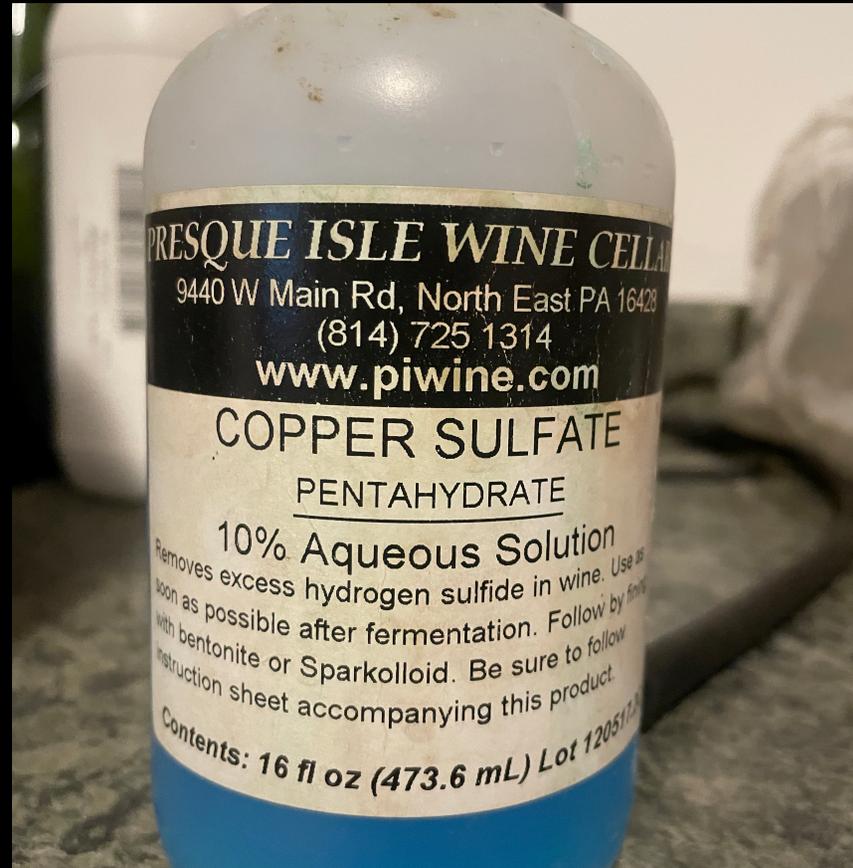
Packaging Considerations for Aromatic Optimization

- Filtration
- Dissolved Oxygen, Free SO₂
- Closure Type

Correcting Off-Aromas

Last Resorts

- Fining
- Filtration
- Splash-racking
- Blending



Take Home Messages

Final Thoughts on Aromatic Optimization

- Be intentional with your winemaking every step of the way
- Adjust parameters as necessary to advance stylistic aims
- Prevention of spoilage is always more effective than cures

Thank You!

Any further questions? Feel free to reach out!

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