



Inspiring innovation.



# WINE ADJUSTMENT SERIES

## ACID ADDITION TRIALS

### Acid Additions

**White wine:** Adjustments are usually done for sensory modifications. Tartaric, malic and citric acids are used individually and in combination. Additions are usually made in increments of 0.025g/100mL. The starting point and range is usually dictated by experience (eg. to increase TA to 0.750g/100mL) or is defined by the winemaker. Because this type of adjustment series is based on a theoretical change in TA, additional analyses may be ordered after a sensory evaluation. (eg. see Additions: below)

**Red wine:** Adjustments are usually done for pH modification. Tartaric acid is added in increments of 0.05g/100mL. The samples are frozen, thawed and evaluated for pH changes. Additional analyses may be ordered (eg TA) after sensory evaluation.

### Acid Spiking Solutions

- 10% Tartaric Acid (10g/100mL water)
- 8.9% Malic Acid (8.9g/100mL water)
- 8.5% Citric Acid (8.5g/100mL water)

### Additions

1.0 mL spiking solution/100mL wine will increase TA by 0.100g/100mL.

This change is empirical and resulting TA's are usually close. Even less predictable is the magnitude of a change in pH. There can also be an alteration in Heat and/or Cold stability. (Something to keep in mind when doing these additions, remember to confirm wine stability.).

### Method

1. Determine TA and pH of wine
2. Measure 100mL wine into several 4oz bottles.
3. Label each bottle with wine type and acid addition. (eg. +0.025 Hta) Mark one as a "Control"
4. Pipet appropriate additions to each, using Eppendorf pipettor or serological pipet. (Check the stock acids for soundness prior to use -- no mold or precipitate should be present)
5. For pH adjustment in red wines: freeze, thaw, decant, and check pH and/or TA.

For sensory modifications in white wines: prepare samples within 24 hours prior to tasting and refrigerate.

### Notes

To make the addition with tartaric acid for a 0.1 g/100mL TA increase use about 3.8 grams per gallon.

*The indications supplied are based on our current knowledge and experience, but do not relieve the user from adopting the necessary safety precautions or from the responsibility of using the product(s) properly.*

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