

# AV – pH

Cat. no. 201

## Intended Use

AV-pH is intended for measuring the pH of grape juice, must and wine.

## Methodology

AV-pH is based on the changes in color exhibited by the pH-dependent dye bromphenol blue.

## Sample

Samples of grape juice, must and wine may be used as is. The patent pending ACCUVIN AV-pH test strip removes the usual interferences from colored and turbid samples. Samples do not have to be pre-filtered or treated with color removing substances such as activated carbon or polyamide powder. Sample temperature may be from 0°C - 35°C (32°F - 95°F). Results will be pH at 20°C (68°F). Note that pH meter results will change 0.1 pH unit or more per ten degrees C; this test does not.

## Procedure

1. Squeeze upper sampler bulb. Dip sampler tip into grape juice, must or wine sample, then release to aspirate sample. (If you prefer to use an air displacement pipette, set sample volume at 20 µL.)
2. Transfer sample to the rectangular absorbent layer on back of test strip by squeezing sample bulb. **Apply slight pressure with sampler tip.** Allow sample droplet to absorb into absorbent layer. Note that only sample present in the sampler tip will be dispensed. Wait 3 min. for color development.
3. Determine sample pH by comparing the developed color to the color chart on the test strip container. If test strip color falls between two color chips select an intermediate value for the sample pH. **(Since fluorescent lights have a green cast, color matching is best under incandescent or natural lighting.)**

## Interpretation

Knowledge and control of pH is important in the production of premium wine. Monitoring pH as grapes approach ripeness helps ensure optimum varietal character at harvest.<sup>1-4</sup> During processing, controlling pH improves fermentation. Post fermentation, lower pH levels increase the effectiveness of bentonite clarification and improve color stability.<sup>5</sup> Regarding taste, wines with lower pH exhibit increased astringency and increased sourness.<sup>6</sup> Knowledge of the pH is also important for proper control of sulfur dioxide levels.<sup>5</sup> Wines above pH 3.6 are also at risk of bacterial instability.<sup>7</sup>

In quality wine, the optimum pH value for red table wines is considered 3.3 – 3.6, and for white table wines, 3.1 – 3.4. Dessert wines usually have a slightly lower pH range.<sup>8</sup>

See **Summary Interpretation Table** on reverse side.

## Storage

Store away from direct sunlight at temperatures below 80°F. Product is satisfactory until the date printed on the test strip container label.

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Seller's limitation of liabilities: Every effort has been made to ensure the material contained in this informational insert and the results obtained with AV test strips are as accurate as possible, but no warranty or fitness is implied. Buyer shall not in any event be entitled to, and seller shall not be liable for, indirect, special, incidental or consequential damages of any nature including, without being limited to, loss of profit, promotional or manufacturing expenses, overhead, injury to reputation or loss of customers. Buyers recovery from seller for any claim shall not exceed buyer's purchase price for the products irrespective of the nature of the claim, whether in contract, tort, warranty, or otherwise.

## Summary Interpretation for Most Wines

(Because of varietal & stylistic differences, growers & winemakers should make final interpretations.)

<u>pH</u>	<u>Harvest</u>	<u>Must and Wine</u>
<3.0	Wait to pick.	SO <sub>2</sub> is 2.4 times as effective as at pH 3.4; MLF will be slow.
3.0	Wait to pick.	SO <sub>2</sub> is 2.0 times as effective as at pH 3.4; MLF will be slow; consider increasing yeast inoculum; low end of common range for white table wines.
3.1	Wait to pick for red wines; consider picking for white wines if sugars are > 21%.	SO <sub>2</sub> is 1.6 times as effective as at pH 3.4; MLF will likely be slow.
3.2	Wait to pick for red wines; pick for white wines if sugars are > 20%.	SO <sub>2</sub> is 1.6 times as effective as at pH 3.4; MLF will likely be slow.
3.3	OK to pick for red wines if sugars > 23%; pick for white wines if sugars are > 19%.	SO <sub>2</sub> is 1.2 times as effective as at pH 3.4; low end of common range for red table wines.
3.4	OK to pick for reds if sugars are >22%; pick for whites if sugars are >18%.	MLF rate likely to be OK; high end of common range for white table wines.
3.5	OK to pick for reds if sugars are > 21% pick for whites if sugars are >17%.	SO <sub>2</sub> is only 0.8 times as effective as at pH 3.4; MLF rate OK;
3.6	OK to pick for reds if sugars are > 20%	SO <sub>2</sub> is only 0.6 times as effective as at pH 3.4; MLF rate OK; high end of common pH range for red table wines.
3.7	O.K. to pick for red wines even if sugars are only 18%.	SO <sub>2</sub> is only 0.5 times as effective as at pH 3.4; acid addition is likely required before fermentation.
3.8	Consider picking now, quality declining even with lower sugar.	SO <sub>2</sub> is only 0.4 times as effective as at pH 3.4; acid addition is likely required before fermentation; risk of bacterial instability.
3.9	Consider picking now, quality declining even with low sugar.	SO <sub>2</sub> is only 0.3 times as effective as at pH 3.4; acid addition is likely required before fermentation; risk of bacterial instability.
4.0	Monitor earlier next year!	SO <sub>2</sub> is only 0.25 times as effective in must as at pH 3.4; high risk of bacterial instability.
>4.0	Monitor earlier next year!	

## References

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