

WINEMAKERS ACID TEST KIT

THE IMPORTANCE OF ACID TESTING: Due to the variability of acid content in fruits and grapes, it is best to adjust the acid content of the must prior to fermentation. A proper acid balance prevents formation of off-flavors, and encourages proper yeast development.

ACIDITY MEASUREMENT: Acid measurements are expressed as percent (%) tartaric acid in the U.S., and as parts per thousand (ppt) sulfuric acid by European and British winemakers. These are simply different ways of saying the same thing about acid content of a must. The following are target acid levels for various type wines:

TYPE WINE	% TARTARIC	ppt SULFURIC
white grape	.65 – .75	4.2 – 4.9
red grape	.60 – .65	3.9 – 4.2
fruit	.55 – .65	3.6 – 4.2

TYPICAL ACIDITY IS 0.6% TARTARIC OF 4 PPT SULFURIC

ACID TEST PROCEDURE:

1. Rinse the syringe with the must or wine being tested, then fill with 3ml and transfer to the test tube.
2. For red or dark colored wines, add approximately two syringes (6ml) of water, preferably distilled, to lighten the color. This is not necessary for white wines. Accuracy here is not important.
3. Add 3 or 4 drops of phenolphthalein (acid indicator solution) to the sample.
4. Rinse the syringe with water, then fill with 3ml of sodium hydroxide test reagent. Slowly add this reagent to the sample in the tube, swirling frequently to mix. In good light, against a white background, examine after swirling to detect any color change. Continue to add reagent from the syringe, drop by drop, until a color change appears in the entire solution. Streaks of color may appear earlier but disappear upon swirling.
5. The appearance of a color change throughout the sample means you have reached the endpoint – STOP!!! Further reagent will deepen the color but give a false reading. The color change will be pink for whites, grayish for other wines; the exact color is not important, the fact of a color change throughout the sample is the key indicator.
6. Note the amount of reagent used to obtain the color change (NOT the amount left in the syringe!) This amount in ml's multiplied by .25, gives acid content in percent tartaric. For example, if 2.4ml was used, acid content is .60% tartaric. The amount used if multiplied by 1.6, gives acid content as ppt sulfuric (see above).

ADJUSTING ACID LEVELS: To **INCREASE** the acid content of wines, add either malic acid, citric acid, tartaric acid or acid blend. One level teaspoon of acid will raise the acid content of one U.S. gallon of wine by about .15% tartaric or 1 ppt sulfuric. One ounce of acid will raise the acid content of 5 U.S. gallons of must by .17% tartaric or 1.1 ppt sulfuric.

To **REDUCE** the acid content, dilute the must with the necessary quantity of water or sugar solution to bring the acid level into the desired range. Alternately, excess acid can be neutralized by addition of calcium carbonate (precipitated chalk.) Precipitates formed will settle out with the lees. 1/4 OZ. of calcium carbonate will reduce the acidity of one U.S. gallon by 0.2% tartaric or by 1.3 ppt sulfuric. 3 tsp. of calcium carbonate reduces one U.S. gallon by .15% tartaric of 1.0 ppt sulfuric.

REPLACEMENT SOLUTIONS: Only use identical replacement solutions from BSG HandCraft.



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