Inspiring innovation.

TITRATABLE ACIDITY

BY pH METER

Equipment

- 250 mL Erlenmeyer flask
- 5 mL volumetric pipet-Class A
- Hot plate, coffeemaker, or microwave (source of hot water for degassing sample)
- 10 or 25 mL buret
- Pipet Safety Bulb
- Stir plate (optional)
- pH meter and electrode

Reagents

- 0.10 N NaOH
- Phenolphthalein, 1% (optional)
- Distilled Water

Procedure

Calibrate and check pH meter. Pipet 5 mL of wine or must into the beaker (does not have to be the sample you are testing). Add approximately 100 mL of pH adjusted hot distilled water and a few drops of phenolphthalein. Fill buret with 0.1 N NaOH and titrate solution in beaker to 8.2 pH endpoint (must stir continuously while titrating). Pipet 5mL of sample into the beaker. Fill buret with 0.1N NaOH and record initial reading. Titrate solution to an 8.2 pH endpoint (stir continuously). Record final reading and perform calculation. (Once initial 8.2 solution is established it can be reused for each sample.) Phenolphthalein will help indicate the nearness of the endpoint, although, it is difficult to see with dark wines.

Calculations

TA (as g Tartaric/100 mL sample) = (mL NaOH)(N NaOH)(1.5)

Example: (6.0 mL NaOH)(.1N NaOH)(1.5) = 0.900 g Tartaric/100 mL

Notes

- For juice samples, it is frequently necessary to centrifuge samples. If a centrifuge is not available, strain juice through strainer before pipeting. A wide mouth 5 mL serological pipet should only be used as a last resort.
- Standardize 0.1 N NaOH frequently.

Disposal

Sink disposal, rinse with water.

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