

Practical work**Definition of mass concentration of Volatile Acidity by Titration method**

General review

The volatile acidity is formed from the acids of the acetic series present in wine in the free-state and combined as a salt. Titration of the volatile acids separated from the wine by steam distillation and titration of the distillate.

The sample to be analyzed:

Wine (red or white)

Equipment and Support Materials

Steam distillation apparatus;
Source of heating, e.g. oven;
100-150 mL Erlenmeyer flask;
50 mL Burette for titration;
10 mL glass pipette.

Reagents

Sodium hydroxide solution (NaOH -0.01N);
1 % phenolphthalein solution in 96 % vol neutral alcohol
Boiling chips granules.

Procedure

Add 300 mL of distil water in Erlenmeyer Flask of the Steam distillation apparatus;
Add 2-4 granules of boiling chips;
Place 10 mL of wine into the special "cave" of the apparatus;
Water boils and the steam with wine-distillate runs into the 100-150 mL Erlenmeyer flask;
The 60-70 mL of distillate must be collected (x6 distillation);
Add 3-4 drops of phenolphthalein solution as indicator;
Titrate the solution with Sodium hydroxide solution until a pink color appears (coloration must be stable for at least 10 seconds);
The amount of titration solution (mL) used shall be fixed.

Calculation

The volatile acidity (g/L) = amount of used titration solution (mL) X 0.06