OIV-MA-AS2-05 Alkalinity of ash

Type IV method

1. Definition

The alkalinity of the ash is defined as the sum of cations, other than the ammonium ion, combined with the organic acids in the wine.

2. Principle

The ash is dissolved in a known (excess) amount of a hot standardized acid solution; the excess is determined by titration using methyl orange as an indicator.

3. Reagents and apparatus

3.1. Sulfuric acid solution, 0.05 M H_2SO_4

3.2. Sodium hydroxide solution, 0.1 M NaOH

3.3. Methyl orange, 0.1% solution in distilled water

3.4. Boiling water□bath

4. Procedure

Add 10 mL 0.05 M sulfuric acid solution (3.1) to the ash from 20 mL of wine contained in the platinum dish. Place the dish on the boiling water□bath for about 15 min, breaking up and agitating the residue with a glass rod to speed up the dissolution. Add two drops of methyl orange solution and titrate the excess sulfuric acid against 0.1 M sodium hydroxide (3.2) until the color of the indicator changes to yellow.

5. Expression of results

5.1. Method of calculation

The alkalinity of ash, expressed in milliequivalents per liter to one decimal place, is given by:

$$A=5\ (10-n)$$

where *n* mL is the volume of sodium hydroxide, 0.1 M, used.

5.2. Alternative expression

The alkalinity of ash, expressed in grams per liter of potassium carbonate, to two decimal places, is given by:

A=0.345 (10-n)

Bibliography

- JAULMES P., *Analyse des vins*, Librairie Poulain, Montpellier, éd., 1951, 107.