Method OIV-MA-VI-06 : R2000
Type II method

Determination of total dry extract content in vinegars

(OENO 57/2000)

1. Introduction

The main purpose of determining the total dry extract content is to detect certain frauds, for instance the addition of water or an aqueous solution of acetic acid (very low total dry extract value) or the addition of non-volatile substances (very high total dry extract value). To interpret the results accurately, it is necessary to have a database for the type and origin of the analyzed vinegar.

2. Definition

The total dry extract refers to all the substances which, under the conditions described here, do not volatilize and are not affected by alteration.

3. Principle

Evaporation of sample and drying in oven, then weighing.

4. Equipment and utensils

Standard laboratory equipment including:

4.1. Water bath at 100 °C

4.2. Water oven

4.3. Flat base capsules approximately 50 mm in diameter and 20 mm in height of platinum or stainless steel.

5. Preparation of sample

Homogenize the sample by stirring and filter if necessary.

6. Technique

Add 10 ml of the sample to a previously calibrated capsule, evaporate in a water bath at 100°C for 30 min., dry in an oven for 2 hours 30 min., cool in a dryer and weigh.

To obtain conclusive results, always use capsules with the same characteristics and comply strictly with the described drying times.

7. Results

7.1. Calculation

Considering:

- m_1 the mass of the empty capsule in grams
- m_2 the mass of the capsule containing the residue in grams

The total dry extract content, expressed in g/l, given by:

$$100\,(m_2 - m_1)$$

7.2. Presentation

Round off the results given in g/l to the nearest decimal.

8. Inter-laboratory validation (CPIV, 1995, Curvelo-Garcia 1996)

$$r = 0.8 \text{ g/l}$$

$$R = 2.8 \text{ g/l}$$

9. Bibliography

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2. AOAC, 1984, *Official Methods of the Ass. Offic. Agric. Chem.*, 14th edit., Arlington USA.
3. CPIV, 1995. *Methods of Analysis*, Annex 4 to the minutes of CPIV Technical Committee's Meeting, Stuttgart, Germany.
4. Curvelo-Garcia A.S., 1996. Wine vinegars. Methods of Analysis (Part Two). *Green Sheet of OIV No. 1033.*
5. AOF / WHO - Commission of Codex Alimentarius, *Methods of analyzing the European regional standard for vinegar*, Alinorm 83/19 and 85/19.