

Method OIV-MA-VI-03 : R2000

Type II method

## **Determination of the volatile acid content in vinegars**

(OENO 54/2000)

### **1. Definition**

By convention, the volatile acidity of vinegar refers to the difference between the total acidity and the fixed acidity.

### **2. Principle**

Calculation of difference between total acidity and fixed acidity, expressed in grams of acetic acid per L.

### **3. References**

See the methods I (determination of total acidity content) and II (determination of the fixed acidity content).

### **4. Results**

#### **4.1. Calculation**

Considering:

- $A_t$  to be the total acidity content (expressed in grams of acetic acid per L of sample) and
- $A_f$  to be the fixed acidity content (expressed in grams of acetic acid per L of sample).

The volatile acidity content expressed in grams of acetic acid per L of sample is given

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by:

$$A_t - A_f$$

### 4.2. Presentation

The results expressed in grams of acetic acid per liter are given to the first decimal.

### 5. Interlaboratory validation (Hitos et al/2000)

Units: % (m/V)

Sample	r	S <sub>r</sub>	RSD <sub>r</sub>	R	S <sub>R</sub>	RSD <sub>R</sub>	RSD <sub>R</sub> (Horwitz)	Horrat Index
1 - 8.24% (m/v)	0.0445	0.016	0.19	0.1632	0.058	0.71	2.91	0.24
2 - 11.17% (m/v)	0.0438	0.016	0.14	0.1967	0.070	0.63	2.78	0.23
3 - 11.20% (m/v)	0.0595	0.021	0.19	0.2076	0.074	0.66	2.78	0.24
4 - 11.94% (m/v)	0.0473	0.017	0.14	0.1652	0.059	0.49	2.75	0.18
5 - 11.16% (m/v)	0.0518	0.019	0.17	0.3577	0.0128	1.14	2.78	0.41

### 6. Bibliography

1. Anonymous, 1993, *Métodos Oficiales de Análisis*, Tomo II, Ministerio de Agricultura, Pesca y Alimentación, Madrid, Spain.

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2. AOAC, 1984, *Official Methods of the Ass. Offic. Agric. Chem.*, 14th edit., Arlington USA.
3. Hitos P., Pons A., Martin de la Hinojosa, I, Gomez R., Hernandez A. and Muñoz J., 2000. Validation of analysis methods for total, fixed and volatile acidity of non-volatile reducing substances, copper and zinc in wine vinegars, *Green Sheet of OIV No. 115*.