RESOLUTION OENO 13/2008

CHARACTERISTICS OF THE METHOD FOR DETERMINING THE SULPHUR DIOXIDE CONTENT OF WINE VINEGAR – AMENDMENTS TO THE METHOD

THE GENERAL ASSEMBLY

IN VIEW of Article 2 paragraph 2 iv of the Agreement establishing the International Organisation of Vine and Wine

HAVING STUDIED the research by the Methods of Analysis Sub-commission, with particular regard to the characteristics of the two methods for determining the concentration of SO_2 in wine vinegar

CONSIDERING resolution OENO 60/2000 on the method for determining the sulphur dioxide content in wine vinegars

DECIDES upon the proposal of Commission II "Oenology", to amend resolution OENO 60/2000 and particularly to replace points 8 and 9 of the resolution with the following points:

Title	Type of method
Determination of the sulphur dioxide content of wine vinegar	IV

8 – Characteristics of the method

8.1 Repeatability of the iodometry method for determining SO_2 in vinegar

Seven red wine vinegars and five white wine vinegars were analysed in duplicate in order to determine the repeatability parameters (table 1).

Table 1 Total SO_2 content in different vinegars in mg/l

	Test 1	Test 2	Difference
Red wine vinegars	14	14	0

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	23	27	-4
	64	61	3
	46	50	-4
	119	129	-10
	188	174	14
	38	37	1
White wine vinegars	61	65	-4
	85	85	0
	29	26	3
	96	91	5
	141	150	-9

Mean = 75.54 mg/l

Repeatability: standard deviation=4.4; r limit= 12.38 mg/l

Relative repeatability r = 15%

8.2 Recovery rate of added concentrations

Quantities of SO_2 were added to different vinegars in order to calculate the recovery rate of the iodometry determination method (table 2).

Table 2 Study of recovery rate of known concentrations added to different vinegars

	Initial concentration (mg/l)	Added concentration (mg/l)	Concentration recovered (mg/l)	Recovery rate
Red wine vinegars	5	25	11	**44%**

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	5	50	49	**98%**
	38	100	76	**76%**
	38	150	133	**89%**
White wine vinegars	26	25	25	**100%**
	26	50	47	**94%**
	0	100	66	**66%**
	0	150	118	**79%**

The recovery rate varies from 44% to 100%: occasionally it is too low, but is nonetheless more acceptable than the rate noted for the method of drying under a nitrogen stream, which sometimes produces excessive values.

9 – Important remark

After studying the application of the reference method for the determination of sulphur dioxide described in the Compendium of International Methods of Analysis of Wine and Must to vinegars, the results produced are unsatisfactory in terms of the recuperation rate of added SO_2 concentrations, which appears to be due to the very high concentration of acetic acid.

10 - Bibliography

1. Curvelo-Garcia A.S. and Godinho M.C., 1986. Determinação analítica do dióxido de enxofre em vinagres. Optimização das condições operatórias, Ciência e Técnica Vitivinícola, 5(1): 25 - 29.
2. FAO/OMS, Commission du Codex Alimentarius, 1982. Doc. CX/EURO 82/3, Partie II, Annexe I, Roma.
3. B. Medina : Dosage du SO2 dans les vinaigres de vin - comparaison de deux méthodes Document OIV, CII-SCMA 03.2006-13.5 - FV 1236

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