

COMMISSION REGULATION (EEC) No 2348/91

of 29 July 1991

establishing a databank for the results of analyses of wine products by nuclear magnetic resonance of deuterium

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community,

Having regard to Council Regulation (EEC) No 822/87 of 16 March 1987 on the common organization of the market in wine ⁽¹⁾, as last amended by Regulation (EEC) No 1734/91 ⁽²⁾, and in particular Article 79 (3) thereof,

Whereas the experience gained by the competent bodies in the Member States has demonstrated the need for more effective controls on the preparation of products which are offered on the wine market, in particular as regards compliance with national and Community provisions governing the adjustment of the potential and actual alcoholic strength of grape must and wines;

Whereas the second subparagraph of Article 16 (2) of Council Regulation (EEC) No 2048/89 of 19 June 1989 laying down general rules on controls in the wine sector ⁽³⁾, provides that each Member State must forward to the Joint Research Centre, hereinafter called the 'JRC', samples and analysis reports to be determined for the establishment of an analytical databank for wine products;

Whereas adjustment of the potential and actual alcoholic strength of grape must and wines by the addition of sucrose of concentrated grape must or of rectified concentrated grape must is an oenological practice which is sometimes used fraudulently in that the approved limits are exceeded or the alcoholic strength of wine products which cannot legally be enriched is adjusted; whereas the analysis of wine or wine products by nuclear magnetic resonance of the deuterium in the ethyl alcohol contained in these products is a method of analysis recognized by Commission Regulation (EEC) No 2676/90 ⁽⁴⁾; whereas the application of this method of analysis can improve checks on the enrichment of wine products; whereas, in order to facilitate interpretation of the results obtained by

this method of analysis and to make it more trustworthy, an analytical databank should be created to enable comparison of the results obtained by the above method of analysis and those obtained using the same method during previous analyses of products with similar physico-chemical characteristics as a result of their originating in the same or in a neighbouring area and of other conditions of production;

Whereas detection of the enrichment of wines requires particular attention; whereas, therefore at least initially, provisions should be made for the analytical databank to be restricted to data obtained from samples analysed by nuclear magnetic resonance of deuterium;

Whereas the analysis of wine products by nuclear magnetic resonance of deuterium is a relatively new method; whereas to extend scientific exchanges between the official laboratories and promote cooperation in the interpretation of analytical results, the databank at the JRC should be accessible to the official laboratories using this method of analysis and to other official bodies requesting such access, subject to observance of the principles of the protection of private information;

Whereas the measures provided for in this Regulation are in accordance with the opinion of the Management Committee for Wine,

HAS ADOPTED THIS REGULATION:

Article 1

An analytical databank for wine products at the JRC is hereby established pursuant to Article 16 (2) of Regulation (EEC) No 2048/89.

This databank shall be limited to data obtained from the analysis of wine products by nuclear magnetic resonance of the deuterium contained in the ethyl alcohol of the product in question in accordance with the method described in Chapter 8 of the Annex to Regulation (EEC) No 2676/90. The databank is to help harmonize interpretation of the results obtained by the official laboratories of the Member States by imposing the above method of analysis.

⁽¹⁾ OJ No L 84, 27. 3. 1987, p. 1.

⁽²⁾ OJ No L 163, 26. 6. 1991, p. 6.

⁽³⁾ OJ No L 202, 14. 7. 1989, p. 32.

⁽⁴⁾ OJ No L 272, 3. 10. 1990, p. 1.

Article 2

1. For the establishment of the analytical databank referred to in Article 1, samples of fresh grapes for analysis shall be taken, treated and processed into wine in accordance with Article 3 of Commission Regulation (EEC) No 2347/91⁽¹⁾.

The samples of fresh grapes shall be taken from vineyards situated in a wine-growing area of clearly defined soil type, situation, vine training system, variety, age and cultural practices.

Samples shall be taken each year, beginning in 1991, and shall be analysed in one of the official laboratories of the Member States. Wine-producing Member States not equipped to carry out analysis by nuclear magnetic resonance shall send their wine samples to the JRC for analysis.

The number of samples to be taken each year for the databank at the JRC shall be at least:

- 400 samples in France
- 400 samples in Italy
- 200 samples in Germany
- 100 samples in Spain
- 50 samples in Portugal
- 50 samples in Greece
- 2 samples in Luxembourg
- 2 samples in the United Kingdom.

The selection of samples must take account of the geographical situation of vineyards in the above Member States. It may be adjusted in the light of the results if the examination as referred to in Article 4.

2. Each year at least 25 % of the samples shall be taken from the same vineyards as in the previous year.

3. The samples referred to in paragraph 1 shall be analysed by the method described in Chapter 8 of the Annex to Regulation (EEC) No 2676/90 by laboratories to be designated by the Member States or by the JRC. An analysis report shall be drawn up in accordance with the specimen given in the Annex.

A description sheet shall be drawn up for each sample in accordance with the instructions given in Annex II to Regulation (EEC) No 2347/91.

4. A copy of the report with the results and interpretation of the analyses performed by the laboratory of a Member State in accordance with this Regulation along

with a copy of the description sheet shall be sent to the JRC.

5. Member States and the JRC shall ensure that:

- the information in the analytical databank is kept for not less than five wine-growing years following the year to which it refers,
- at least one control sample from the samples sent to the JRC for analysis is kept for at least three years from the date the sample is taken,
- the databank is used only for monitoring the application of Community and national wine legislation or for statistical or scientific purposes,
- measures are taken to guarantee protection of the data, in particular against theft and tampering,
- files are made available, without undue delay or cost, to those to whom they relate so that any inaccuracies can be rectified.

Article 3

Member States carrying out their own analysis of wine products by nuclear magnetic resonance shall send at least 10 % of the samples referred to in the fourth subparagraph of Article 2 (1) for control analysis by the JRC or by any other laboratory officially designated by the JRC. The JRC shall select the samples to be put at its disposal.

Article 4

Pursuant to Article 17 (1) of Commission Regulation (EEC) No 2048/89 the Commission shall send the following to the Management Committee for Wine for examination:

- results of analyses to be included in the JRC databank,
- measures to be applied in cases where the results of analyses and their interpretation with regard to the same product diverge,
- an assessment of the statistical parameters of the results of analysis by nuclear magnetic resonance,
- any amendments to the procedure for the establishment of the databank laid down in Article 2 (1), in particular, with regard to the number of samples to be taken in each vineyard,
- the date by which the information stored in the JRC databank shall be considered as representative of all Community vineyards and, if necessary, the conditions permitting the interpretation of the results of analysis by reference to this databank. This date shall be no later than 31 March 1993.

⁽¹⁾ See page 32 of this Official Journal.

Article 5

1. The information contained in the JRC databank shall be made available on request to each official laboratory of the Member States from the date laid down in the fifth indent of Article 4.

2. In duly substantiated cases, the information referred to in paragraph 1, when representative, may be made available to other bodies responsible for the application of Regulation (EEC) No 2048/89 and, on request, to other official bodies.

Article 6

From the date of the entry into force of this Regulation Member States shall ensure that the results of analysis by nuclear magnetic resonance contained in their own data-

banks are obtained by analyzing samples taken and processed in accordance with Community rules.

Until the information stored in the JRC databank becomes available, Member States may use the information contained on 1 September 1991 in the national databanks and obtained by procedures which differ from those set out in the Community provisions.

Article 7

The second and third paragraphs of point 2 of Chapter 8 of the Annex to Regulation (EEC) No 2676/90 shall be deleted with effect from the date laid down in the fifth indent of Article 4.

Article 8

This Regulation shall enter into force on 1 September 1991.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 29 July 1991.

For the Commission

Ray MAC SHARRY

Member of the Commission

ANNEX

ANALYSIS REPORT

Wine and wine product samples analysed by SNIF-NMR, in accordance with the experimental protocol set out in Chapter 8 of the Annex to Regulation (EEC) No 2676/90, to be entered in the JRC isotope databank⁽¹⁾

I. GENERAL INFORMATION

1. Country
2. Sample No
3. Year
4. Vine variety
5. Class of wine
6. Region/district
7. Name and address of NMR laboratory responsible for the results
8. Sample for control analysis by the JRC: yes/no

II. METHODS AND RESULTS

1. Wine

- | | |
|---|-------|
| 1.1. Alcoholic strength by volume | % vol |
| 1.2. Total dry extract | g/l |
| 1.3. Reducing sugars | g/l |
| 1.4. Total acidity expressed as tartaric acid | g/l |
| 1.5. Total sulphur dioxide | mg/l |

2. Distillation of wine for SNIF-NMR

- 2.1. Description of distillation apparatus

- 2.2. Volume of wine distilled/weight of distillate obtained

3. Analysis of the distillate

- | | |
|--|---------|
| 3.1. Water content | % (m/m) |
| Method: Karl Fischer/Densitometry | |
| 3.2. Volatile substance other than ethyl alcohol | % (m/m) |
| Method: Gas chromatograph with a suitable capillary column Attach a trace of the chromatogram on paper | |
| 3.3. Ethyl alcohol in wine distillate | |

$$\frac{D}{M} = 1 - \frac{\text{water content \% (m/m)}}{100}$$

⁽¹⁾ The report must be sent to the JRC with the questionnaire on sampling.

4. Analysis of N. N-tetramethylurea

4.1. Water content % (m/m)

4.2. Priority of TMU % (m/m)

Method : Gas chromatography with a suitable capillary column Attach a trace of the chromatogram on paper

5. Isotopic correlations5.1. $(D/H)_I =$ ppm standard deviation :5.2. $(D/H)_{II} =$ ppm standard deviation :5.3. $(D/H)_{QW} =$ ppm standard deviation :5.4. $(D/H)_{TMU} =$ ppm standard deviation :

5.5. 'R' = standard deviation :

6. NMR parameters

Observed frequency

Memory

Number of scans

Number of tests

Acquisition time

90° pulse : 01 : 02 :

Decoupling power : Decoupling mode :

Temperature : ; Exponential multiplication : Hz ;

Correction of the base line : yes/no

Zero filling : yes/no

²H spectrum on paper in 21 × 29,7 format in accordance with the example given in the experimental protocol set out in point 8 of the Annex to Regulation (EEC) No 2676/90.