# RESOLUTION OENO 20/2000

# INTERNATIONAL OENOLOGICAL CODEX

# CALCIUM CARBONATE

Calcii carbonas

$CaCO_3$ = 100.1

SIN NO. 170

## 1. OBJECTIVE, ORIGIN AND SCOPE OF APPLICATION

This product is used for deacidification. The transport of calcium ions causes salification of free tartaric acid. The use of calcium carbonate is also authorized when using the so-called "double salt" method of deacidification. It may then contain small quantities of calcium tartromalate (double salt) and/or calcium tartrate There are regulations governing the use of this product..

## 2. LABELING

The label should indicate the proportion of pure ccalcium carbonate and the safety and storage requirements.

## 3. CENTESIMAL COMPOSITION

| | |
|---|---|
| Carbon dioxide | 43.97 |
| Calcium | 40.04 |

## 4. PROPERTIES

Calcium carbonate exists as a white powder with the reaction properties of carbonates. In solution in a concentration of 5 pp 100 (m/v) in dilute acetic acid (R), it yields calcium reactions.



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# 5. SOLUBILITY

Insoluble in water

Insoluble in alcohol at 95% by vol.

Soluble with effervescence in dilute acetic acid, hydrochloric acid and nitric acid solutions

# 6. TESTS

## 6.1. Desiccation loss

Weigh 2 g calcium carbonate in a dish. Place in an oven at 200 °C for 4 hours. Weight loss should not exceed 2 pp 100.

## 6.2. Substances Soluble in Water

Mix 2 g of ground calcium carbonate with 20 ml of boiled water. Filter. Collect 10 ml. The solution should be neutral. Dry evaporate. The residue should not be greater than 1 pp 100l.

## 6.3. Ammoniacal Ions

Place 2 g of calcium carbonate, 25 ml of distilled water and 5 ml of 30 pp 100 sodium hydroxide solution (R) in the flask of a distillation device.

Distill and collect 20 ml distillate in 40 ml 4 pp 100 boric acid (R) in the presence of methyl red (R). Two drops of 0.1 M hydrochloric acid solution should be sufficient to cause the indicator to turn color.

## 6.4. Barium

Dissolve 0.50 g of calcium carbonate in 10 ml of nitric acid diluted to 10 pp 100 (R). Add 10 ml of saturated calcium sulfate solution (R). The mixture should remain llear.

## 6.5. Preparing the Solution for Tests

Dissolve 10 g of calcium carbonate in 100 ml of 10 pp 100 dilute acetic acid (m/v) (take care as there will be effervescence due to the release of carbon dioxide).

## 6.6. Magnesium

Use the method described in the Compendium on the solution prepared for testing



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under paragraph 6.5. (Content should be less than 1 pp 100 by weight).

## 6.7. Iron

Use the atomic absorption spectrometry method described in the Compendium on the solution prepared under paragraph 6.5. (Iron content should be less than 300 mg/kg).

## 6.8. Lead

Using the technique described in the annex to quantitatively analyze the lead in the solution prepared for testing (Par. 6.5). (Lead content should be less than 5 mg/kg).

## 6.9. Mercury

Implement the technique described in the annex to quantitatively analyze the mercury in the solution prepared for testing (Par. 6.5). (Mercury content should be less than 1 mg/kg).

## 6.10. Arsenic

Using the method described in the annex, test for arsenic in the solution prepared for testing (Par. 6.5). (Arsenic content should be less than 3 mg/kg).

## 6.11. Sodium

In accordance with the method described in the Compendium, quantitatively determine sodium content by flame photometry in the solution prepared for testing (Par. 6.5). (Sodium content should be less than 500 mg/kg).

## 6.12. Quantitative Analysis

Dissolve a precisely weighed sample p of about 2 g in 50 ml of a 1 M hydrochloric acid solution. Bring to a boil. Allow to cool and and titrate the excess hydrochloric acid solution using 1 M sodium hydroxide solution and methyl red (R). Let n be the amount in ml of 1 M sodium hydroxide solution used:

1 ml of 1 M hydrochloric acid corresponds to 0.05005 g calcium carbonate. Parts per 100 of calcium carbonate in the product tested:

- (50-n) 5.005 / p

The wine-making product must contain a minimum of 98 pp 100 calcium carbonate.



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## 7. STORAGE

Calcium carbonate should be stored in a dry place in hermetically sealed containers away from volatile elements it could adsorb.



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