# COEI-1-POTBIC Potassium hydrogen carbonate

# Potassium bicarbonate

## $KHCP_3 = 100.1$

1. **Objective, origin and scope of the application**

   This product is used to deacidify musts and wines. The transport of potassium ions causes salification of free tartaric acid and the formation of potassium hydrogen tartrate.

   The use of this product is subject to regulation.

2. **Labelling**

   The label should indicate the product's purity and storage and storage conditions.

3. **Centesimal composition**

| | |
|---|---|
| Carbon dioxide | 43.97 |
| Potassium | 39.06 |

4. **Properties**

   Potassium hydrogen carbonate is found in the form of a white, odorless powder which is slightly hygroscopic. It leads to carbonate-based reactions.

5. **Solubility**

| | |
|---|---|
| Water at 20 °C | 600 g/l |

   Insoluble in alcohol, 95% by vol.

   Soluble with effervescence in dilute acid solutions (acetic, hydrochloric, etc.).

6. **Tests**

6.1. Desiccation Loss

After 4 hours of desiccation in an oven at 105 °C, weight loss should be no more than 2 pp 100.

6.2. Preparing the Solution for Tests

Place 10 g of potassium hydrogen carbonate in a 100 ml volumetric flask and fill with water.

6.3. Substances Insoluble in Water

Filter the solution prepared for testing under Paragraph 6.2. The residue, when dried at 105 °C then calcined at 550 °C, should not be greater than 0.1 g (or 1 pp 100).

6.4. Iron

Using the atomic absorption spectometry technique detailed in the Compendium, analyze the iron content in the test solution (6.2).

6.5. Lead

Using the technique set forth in the Annex, analyze lead content in the test solution (6.2). (Lead content should be less than 5 mg/kg).

6.6. Mercury

Using the technique described in the Annex, determine the mercury content in the test solution (6.2). (Content should be less than 1 mg/kg.)

6.7. Arsenic

Using the technique described in the Annex, determine the arsenic content in the test solution (6.2). (Content should be less than 3 mg/kg.)

6.8. Sodium

Analyze the sodium content in the test solution (6.2) using flame photometry. (Sodium content should be less than 1 pp 100).

6.9. Potassium Hydrogen Carbonate Content

Dissolve approximately 2 g of a test sample, weighed precisely, in 50 ml of 1M hydrochloric acid solution. Titrate the excess hydrochloric acid using a 1M sodium hydroxide solution in the presence of methyl red.

The product intended for wine-making should contain a minimum of 98 pp 100 potassium hydrogen carbonate.

**7. Storage**

Potassium hydrogen carbonate should be stored in airtight containers away from

moisture.