COEI-1-POTTAR Potassium-L(+)-Tartrate

Potassium-L-2,3-dihydroxybutanedioate

Dipotassium tartrate

Neutral potassium tartrate

COOK-CHOH-COOK,$(H_2O)_{1/2}$ = 235.3

SIN No. 336 ii

1. Objective, origin and scope of application

Dipotassium L-tartrate is used to deacidify musts and wines. Its use is subject to the regulatory restrictions in force in certain countries.

2. Labelling

The label should indicate product purity (greater than or equal to 98% in the product by dry weight), its safety and storage conditions, and the fact that deacidification of wine is subject to certain requirements.

3. Properties

This is the dipotassium salt of L-tartaric acid (positive rotatory power, sometimes written as L(+) tartaric), which crystallizes with a half-molecule of water:

$C_4H_4O_6K_2,(H_20)_{1/2}$

It is made in the form of white crystals or granulated white powder.

It is highly soluble in water.

4. Tests

4.1. Desiccation Loss (Volatile Substances)

After 4 hours of desiccation in a 105 °C oven, weight loss should not exceed 4 pp 100.

4.2. Preparing the Solution for Tests

Place 10 g of neutral potassium tartrate in a 100 ml volumetric flask and fill to the

gauge line with water.

Perform the same tests on this solution as indicated in the monograph on L(+) tartaric acid and observe the same limits.

4.3. Sodium

Implementing the flame photometry technique detailed in the Compendium, determine sodium content in the test solution (4.2). (Sodium content should be less than 1 pp 100.)

4.4. Iron

Add 1 ml concentrated hydrochloric acid (R) and 2 ml potassium thiocyanate solution (concentration: 5 pp 100) (R) to 10 ml of the test solution (4.2). The red color should not be more intense than that of the control prepared using 1 ml of an iron (III) salt solution (concentration: 0.010 g iron per liter) (R), 9 ml water, and the same quantities of the same reagents. (Content should be less than 10 mg/kg.)

The iron content may also be analyzed using the atomic absorption spectometry technique described in the Compendium.

4.5. Lead

Applying the method set forth in the Compendium, analyze the lead content in the test solution (4.2). Lead content should be less than 5 mg/kg.)

4.6. Mercury

Using the technique described in the Annex, determine the mercury content in the test solution (4.2). (Content to be less than 1 mg/kg.)

4.7. Arsenic

Using the technique described in the Annex, determine the arsenic content in the test solution (4.2). (Content to be less than 3 mg/kg.)

4.8. Distinguishing Between Potassium Tartrate and Potassium Racemate

Place 10 ml of water in a test tube with 1 ml of the test solution prepared under paragraph 4.2, 1 ml crystallizable acetic acid (R) and 2 ml of 25% calcium acetate solution (R). No white, crystalline precipitate should form instantaneously.

4.9. Oxalate

Using the technique described in the Annex, determine the oxalate content in the test solution (4.2). (The oxalate content, expressed in terms of oxalic acid, should be less than 100 mg/kg after drying.)

5. Storage

Potassium tartrate should be stored in hermetically sealed containers.