

Attachment

Amendment to the Ordinance for Enforcement of the Food Sanitation Act and the Specifications and Standards for Foods, Food Additives, Etc.

The government of Japan will designate Potassium hydrogen carbonate as an authorized food additive and establish compositional specifications and use standards for this additive.

Background

Japan prohibits the sale of food additives that are not designated by the Minister of Health, Labour and Welfare (hereinafter referred to as “the Minister”) under Article 12 of the Food Sanitation Act (Act No. 233 of 1947; hereinafter referred to as “the Act”). In addition, when specifications or standards for food additives are stipulated in the Specifications and Standards for Foods Food Additives, Etc. (Public Notice of the Ministry of Health and Welfare No. 370, 1959), Japan prohibits the sale of those additives unless they meet the specifications or the standards pursuant to Article 13 of the Act.

In response to a request from the Minister, the Committee on Food Additives of the Food Sanitation Council under the Pharmaceutical Affairs and Food Sanitation Council (hereinafter referred to as “the Committee”) has discussed the adequacy of the designation of Potassium hydrogen carbonate as a food additive. The conclusion of the Committee is outlined below.

Outline of conclusion

The Minister should designate Potassium hydrogen carbonate as a food additive unlikely to cause harm to human health pursuant to Article 12 of the Act and should establish compositional specifications and use standards for this additive pursuant to Article 13 of the Act (see Attachment for the details).

Potassium Hydrogen Carbonate

炭酸水素カリウム

Standards for Use (draft)

Permitted for use in grape juice used for wine production and in grape wine only.

Compositional Specifications (draft)

Substance Name Potassium Hydrogen Carbonate (Potassium Bicarbonate, Potassium Acid Carbonate)

Molecular Formula KHCO_3

Molecular Weight 100.12

Chemical Name [CAS number]

Potassium hydrogen carbonate [298-14-6]

Content Potassium Hydrogen Carbonate, when dried, contains not less than 99.0% of potassium hydrogen carbonate (KHCO_3).

Description Potassium Hydrogen Carbonate occurs as colorless crystals, or as white granules or powder.

Identification Potassium Hydrogen Carbonate responds to all the tests for Potassium Salt and for Bicarbonate in the Qualitative Tests.

Purity

- (1) Clarity of solution Almost clear (1.0 g, water 10 mL).
- (2) Lead Not more than 2 $\mu\text{g/g}$ as Pb (2.0 g, Method 5, Control Solution: Lead Standard Solution 4.0 mL, Flame Method).

Sample Solution To the specified amount of Potassium Hydrogen Carbonate, add 20 mL of diluted hydrochloric acid (1 in 4), and boil gently for 5 minutes with a watch glass covering it. Allow to cool, and use the solution as the sample solution. If the sample does not dissolve completely, evaporate it to dryness, and add 20 mL of diluted hydrochloric acid (1 in 4) to the residue. Boil gently for 5 minutes, and allow to cool.

- (3) Arsenic Not more than 3 $\mu\text{g/g}$ as As (0.50 g, Standard Color: Arsenic Standard Solution 3.0 mL, Apparatus B).

Test Solution Weigh the specified amount of Potassium Hydrogen Carbonate, and dissolve it by adding 3 mL of water and 2 mL of hydrochloric acid.

Loss on Drying Not more than 0.25% (4 hours).

Assay Weigh accurately about 2 g of Potassium Hydrogen Carbonate, previously dried, dissolve it in 25 mL of water, and titrate with 0.5 mol/L sulfuric acid (indicator: 3 drops of bromophenol blue TS). Boil near the endpoint to let the carbon dioxide out, cool, and continue the titration. The endpoint is when the color of the solution changes from blue-purple to bluish-green.

Each mL of 0.5 mol/L sulfuric acid = 100.1 mg of KHCO₃