POTASSIUM GLUCONATE

Prepared at the 51st JECFA (1998), published in FNP 52 Add 6 (1998) superseding specifications prepared at the 23rd JECFA (1979), published in FNP 12 (1979). Group ADI "not specified" for glucono-delta-lactone and gluconates, excluding ferrous gluconate, established at the 51st JECFA in 1998.

SYNONYMS Potassium D-gluconate; INS No. 577

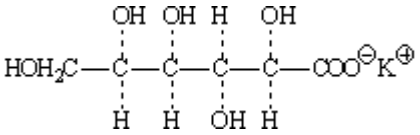
DEFINITION

Chemical names: Potassium D-gluconate

C.A.S. number: 299-27-4 (Anhydrous)
35398-15-3 (Monohydrate)

Chemical formula: $C_6H_{11}KO_7$

Structural formula:



Formula weight: 234.25 (Anhydrous)
252.26 (Monohydrate)

Assay: Not less than 97.0% and not more than 103.0% on dried basis

DESCRIPTION Odourless, free flowing white to yellowish white, crystalline powder or granules

FUNCTIONAL USES Acidity regulator, nutrient supplement, yeast food

CHARACTERISTICS

IDENTIFICATION

Test for potassium (Vol. 4): Passes test

Test for gluconate (Vol. 4): Passes test

PURITY

Loss on drying (Vol. 4): Anhydrous: Not more than 3% (105°, 4 h, under vacuum)
Monohydrate: Not less than 6% and not more than 7.5% (105°, 4 h, under vacuum)

Reducing substances (Vol. 4): Not more than 1.0% calculated as D-glucose (Method I)

Lead (Vol. 4): Not more than 2 mg/kg
Determine using an atomic absorption technique appropriate to the

specified level. The selection of sample size and method of sample preparation may be based on the principles of the method described in Volume 4, “Instrumental Methods.”

METHOD OF ASSAY

Transfer about 175 mg of the sample, accurately weighed, into a clean, dry 200-ml Erlenmeyer flask, add 75 ml of glacial acetic acid and dissolve by heating on a hot plate. Cool, add quinaldine red TS, and titrate with 0.1 N perchloric acid in glacial acetic acid, using a 10-ml microburet, to a colourless end point. Each ml of 0.1 N perchloric acid is equivalent to 23.42 mg of $C_6H_{11}KO_7$.