SODIUM 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) and republished in FNP 52 (1992). Group ADI "not specified" for glucono-delta-lactone and gluconates, excluding ferrous gluconate, established at the 51st JECFA in 1998.

SYNONYMS INS No. 576

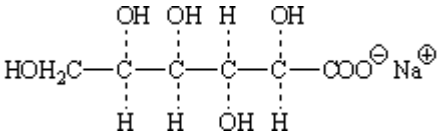
DEFINITION

Chemical names Sodium D-gluconate

C.A.S. number 527-07-1

Chemical formula $C_6H_{11}NaO_7$

Structural formula



Formula weight 218.14

Assay Not less than 98.0%

DESCRIPTION White to tan, granular to fine, crystalline powder

FUNCTIONAL USES Sequestrant, yeast food

CHARACTERISTICS

IDENTIFICATION

Solubility (Vol. 4) Very soluble in water; sparingly soluble in ethanol

Test for sodium (Vol. 4) Passes test

Test for gluconate (Vol. 4) Passes test

PURITY

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 150 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 21.81 mg of $C_6H_{11}NaO_7$.