

SODIUM HYDROGEN CARBONATE

Prepared at the 19th JECFA (1975), published in NMRS 55B (1976) and in FNP 52 (1992). Metals and arsenic specifications revised at the 59th JECFA (2002). An ADI 'not limited' was established at the 9th JECFA (1965).

SYNONYMS Baking soda, bicarbonate of soda, sodium bicarbonate; INS No. 500(ii)

DEFINITION

Chemical names Sodium hydrogen carbonate, sodium acid carbonate

C.A.S. number 144-55-8

Chemical formula NaHCO_3

Formula weight 84.01

Assay Not less than 99.0% after drying

DESCRIPTION Colourless, white, crystalline masses or crystalline powder

FUNCTIONAL USES Alkali, leavening agent, buffer

CHARACTERISTICS

IDENTIFICATION

Solubility (Vol. 4) Soluble in water; insoluble in ethanol

pH (Vol. 4) 8.0 - 8.6 (1 in 100 soln of the sample in cold water without shaking)

Test for sodium (Vol. 4) Passes test

Test for carbonate (Vol. 4) Passes test

PURITY

Loss on drying (Vol. 4) Not more than 0.25% (over silica gel, 4 h)

Water insoluble substances 1 g of the sample dissolves completely in 20 ml of water and gives a clear solution

Ammonium salts Heat 1 g of the sample in a test tube. No odour of ammonia is detected.

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**

Weigh accurately about 3 g of the dried sample, add methyl orange TS and titrate with 1 N sulfuric acid. Each ml of 1 N sulfuric acid is equivalent to 84.01 mg of NaHCO_3 .