

SODIUM HYDROXIDE

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 Caustic soda, lye, sodium hydrate, INS No. 524

DEFINITION

Chemical names Sodium hydroxide

C.A.S. number 1310-73-2

Chemical formula NaOH

Formula weight 40.00

Assay Not less than 95.0% of total alkali calculated as NaOH

DESCRIPTION White or nearly white pellets, flakes, sticks, fused masses or other forms

FUNCTIONAL USES Alkali

CHARACTERISTICS

IDENTIFICATION

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

Test for alkali A 1 in 100 solution of the sample is strongly alkaline

Test for sodium (Vol. 4) Passes test

PURITY

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

Carbonate Not more than 3% as sodium carbonate
Each ml of 1 N sulfuric acid required between the phenolphthalein and methyl orange end-points in the Method of assay is equivalent to 106.0 mg of Na₂CO₃

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

Dissolve about 1.5 g of the sample, accurately weighed, in 40 ml of recently boiled and cooled water, cool to 15°, add phenolphthalein TS and titrate with 1 N sulfuric acid. At the discharge of the pink colour, record the volume

of acid required, then add methyl orange TS and continue to titrate to a persistent pink colour. Record the total volume of acid required for the titration. Each ml of 1 N sulfuric acid is equivalent to 40.00 mg of total alkali, calculated as NaOH.