

SODIUM HYDROGEN SULFATE

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SYNONYMS

Sodium acid sulfate; nitre cake; sodium bisulfate; sulfuric acid, monosodium salt; INS no. 514(ii)

DEFINITION

Sodium chloride and sulfuric acid are combined at elevated temperatures to produce molten sodium hydrogen sulfate. The molten sodium hydrogen sulfate is sprayed and cooled to form a solid product with uniform particle size.

C.A.S. number 7681-38-1

Chemical formula NaHSO_4

Formula weight 120.06

Assay Not less than 85%

DESCRIPTION

White crystals or granules

FUNCTIONAL USES

Acidifier, acidity regulator

CHARACTERISTICS

IDENTIFICATION

Solubility (Vol. 4) Freely soluble in water

Sodium (Vol. 4) Passes test

Sulfate (Vol. 4) Passes test

PURITY

Loss on drying (Vol.4) Not more than 0.8% (105°, 3h, use 25 g of sample)

Water-insoluble matter (Vol. 4) Not more than 0.05% (Use 50 g of sample and 300 ml hot water)

Lead (Vol. 4) Not more than 2 mg/kg
Determine using an AAS/ICP-AES technique appropriate to the specified level. The selection of sample size and method of sample preparation may be based on principles of methods described in Volume 4 (under “General Methods, Metallic Impurities”).

Selenium (Vol. 4) Not more than 5 mg/kg
Determine using an AAS/ICP-AES technique appropriate to the specified level. The selection of sample size and method of sample preparation may be based on principles of methods described in Volume 4 (under “General Methods, Metallic Impurities”).

METHOD OF ASSAY Accurately weigh about 5 g of sample into a 250-ml conical flask, dissolve in about 125 ml of water, and add phenolphthalein TS. Titrate with 1 N sodium hydroxide. Each milliliter of sodium hydroxide is equivalent to 120.06 mg of NaHSO₄.