

# SODIUM NITRITE

*Prepared at the 44th JECFA (1995), published in FNP 52 Add 3 (1995) superseding specifications prepared at the 17th JECFA (1973), published in FNP 4 (1978) and in FNP 52 (1992). Metals and arsenic specifications revised at the 63rd JECFA (2004). An ADI of 0-0.06 mg/kg bw was established at 44th JECFA (1995). Nitrite should not be used for infants below 3 months*

**SYNONYMS** INS No. 250

## DEFINITION

Chemical names Sodium nitrite

C.A.S. number 7632-00-0

Chemical formula  $\text{NaNO}_2$

Formula weight 69.00

Assay Not less than 97.0% on the dried basis

**DESCRIPTION** White or slightly yellow, hygroscopic and deliquescent granules, powder, or opaque, fused masses of sticks

**FUNCTIONAL USES** Antimicrobial preservative, colour fixative

## CHARACTERISTICS

### IDENTIFICATION

Solubility (Vol. 4) Freely soluble in water, sparingly soluble in ethanol

Test for sodium (Vol. 4) Passes test

Test for nitrite (Vol. 4) Passes test

### PURITY

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

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, to the nearest mg, 1 g of the dried sample. Transfer to a 100 ml volumetric flask and dissolve in water diluting to the mark. Pipette 10.0 ml of this solution into a mixture of 50.0 ml of 0.1N potassium permanganate, 100 ml of water and 5 ml of sulfuric acid, keeping the tip of the pipette well below the surface of the liquid. Warm the solution to 40°, allow it to stand for 5

min, and add 25.0 ml of 0.1N oxalic acid. Heat the mixture to about 80° and titrate with 0.1N potassium permanganate.

$$\% \text{NaNO}_2 = \frac{(25 + X)}{W} \times 3.450$$

where

X = ml of 0.1N potassium permanganate used for titration

W = weight (in grams) of the sample