SODIUM NITRITE


SYNONYMS
INS No. 250

DEFINITION
Chemical names
Sodium nitrite

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

Chemical formula
NaNO₂

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\(^\circ\) 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