

SODIUM DIHYDROGEN CITRATE

Prepared at the 30th JECFA (1986), published in FNP 37 (1986) and in FNP 52 (1992). Metals and arsenic specifications revised at the 59th JECFA (2002). A group ADI 'not limited' for citric acid and its calcium, potassium, sodium and ammonium salts was established at the 23rd JECFA (1979)

SYNONYMS

Monosodium citrate, sodium citrate monobasic; INS No. 331(i)

DEFINITION

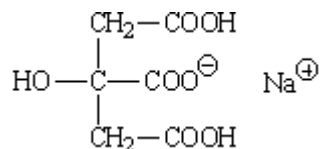
Chemical names

Monosodium citrate, monosodium salt of 2-hydroxy-1,2,3-propanetricarboxylic acid

Chemical formula

$C_6H_7NaO_7$

Structural formula



Formula weight

214.11

Assay

Not less than 99.0% and not more than 101.0%

DESCRIPTION

White, odourless crystals or crystalline powder

FUNCTIONAL USES Buffering agent, sequestrant

CHARACTERISTICS

IDENTIFICATION

Solubility (Vol. 4)

Freely soluble in water; practically insoluble in ethanol

pH (Vol. 4)

3.4 - 3.8 (1 in 10 soln)

Test for citrate (Vol. 4)

Passes test

Test for sodium (Vol. 4)

Passes test

PURITY

Loss on drying (Vol. 4)

Not more than 0.4% (105°, 4 h)

Oxalate (Vol. 4)

Passes test

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 180 mg of the dried sample. Dissolve it in 25 ml of water and titrate with 0.1 N sodium hydroxide (potentiometric end-point determination). Each ml of 0.1 N sodium hydroxide is equivalent to 10.706 mg of $C_6H_7NaO_7$.