

## SODIUM LACTATE (SOLUTION)

*Prepared at the 18th JECFA (1974), published in NMRS 54B (1975) and in FNP 52 (1992). Metals and arsenic specifications revised at the 61st JECFA (2003). An ADI 'not limited' for lactic acid and its salts was established at the 23rd JECFA (1979)*

### SYNONYMS

INS No. 325

### DEFINITION

Chemical names

Sodium lactate, sodium 2-hydroxypropanoate

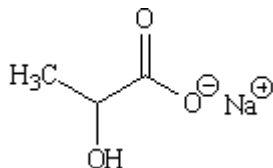
C.A.S. number

72-17-3

Chemical formula

$C_3H_5NaO_3$

Structural formula



Formula weight

112.06 (anhydrous)

Assay

Not less than 95% and not more than 110% of the labelled amount. This specification is based on a 60% w/w solution of  $C_3H_5NaO_3$  in water.

### DESCRIPTION

Colourless, transparent, liquid. Odourless, or with a slight, characteristic odour

**FUNCTIONAL USES** Antioxidant synergist, bodying agent, humectant

### CHARACTERISTICS

#### IDENTIFICATION

Ignition

Ignite to an ash. The ash is alkaline, and an effervescence occurs when acid is added

Colour reaction

Overlay 2 ml of the sample on 5 ml of a 1 in 100 solution of catechol in sulfuric acid. A deep red colour is produced at the zone of contact

Test for lactate (Vol. 4)

Passes test

Test for sodium (Vol. 4)

Passes test

#### PURITY

Acidity

Neutralization of 1 g of sample shall require not more than 0.5 ml of 0.1 N sodium hydroxide solution, using phenolphthalein TS

pH (Vol. 4) 6.5 - 7.5 (1 in 5 soln)

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 0.6 g of the sample into a small beaker, and evaporate to dryness. Add to the residue 60 ml of a 1 in 5 mixture of acetic anhydride in glacial acetic acid, and stir until the residue is completely dissolved. Add crystal violet TS and titrate with 0.1 N perchloric acid to a blue end-point. Perform a blank determination, and make any necessary correction. Each ml of 0.1 N perchloric acid is equivalent to 11.21 mg of  $C_3H_5NaO_3$ .