

# MONOAMMONIUM L-GLUTAMATE

*Prepared at the 31st JECFA (1987), published in FNP 38 (1988) and in FNP 52 (1992). Metals and arsenic specifications revised at the 57th JECFA (2001). A group ADI 'not specified' for glutamic acid and its ammonium, Ca, K, Mg & Na salts, was established at the 31st JECFA (1987)*

## SYNONYMS

Ammonium glutamate, INS No. 624

## DEFINITION

Chemical names

Monoammonium L-glutamate monohydrate

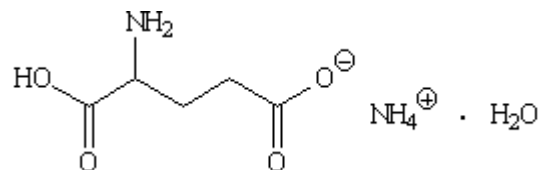
C.A.S. number

7558-63-6

Chemical formula

$C_5H_{12}N_2O_4 \cdot H_2O$

Structural formula



Formula weight

182.18

Assay

Not less than 99.0% on the dried basis

## DESCRIPTION

White, practically odourless crystals or crystalline powder

**FUNCTIONAL USES** Flavour enhancer, salt substitute

## CHARACTERISTICS

### IDENTIFICATION

Solubility (Vol. 4)

Freely soluble in water

Test for glutamate (Vol. 4) Passes test

Test for ammonium  
(Vol. 4)

Passes test

### PURITY

Loss on drying (Vol. 4)

Not more than 0.5% (50°, 4 h)

pH (Vol. 4)

6.0 - 7.0 (1 in 20 soln)

Specific rotation (Vol. 4)

[ $\alpha$ ] 20, D: Between +25.4 and +26.4° (10% (w/v) solution in 2N hydrochloric acid)

Sulfated ash (Vol. 4)

Not more than 0.1%.  
Test 1 g of the sample (Method I)

Pyrrolidone carboxylic acid Passes test  
(Vol. 4)

Lead (Vol. 4)

Not more than 1 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**

Dissolve about 200 mg of the sample, previously dried and weighed accurately, in 6 ml of formic acid, and add 100 ml of glacial acetic acid. Titrate with 0.1 N perchloric acid determining the end-point potentiometrically. Run a blank determination in the same manner and correct for the blank. Each ml of 0.1 N perchloric acid is equivalent to 9.106 mg of  $C_5H_{12}N_2O_4 \cdot H_2O$ .