

## D. MONOGRAPHS

### L-Alanine Solution

**Content** L-Alanine Solution contains not more than 15% of L-alanine ( $C_3H_7NO_2$  = 89.09) and the content of L-alanine is a range of 95.0 - 110.0% of the labeled content.

**Description** L-Alanine Solution is a colorless liquid. It is odorless or has a very slight characteristic odor. It has a sweetish taste.

**Identification** (1) To 5 ml of dilute L-Alanine Solution (1 : 200), add 1 ml of ninhydrin solution (1 : 50), and heat for 3 minutes in a water bath. A bluish purple color develops.

(2) To 5 g of L-Alanine Solution, add 50 ml of diluted hydrochloric acid (1 : 2), and mix. It shows dextrorotatory.

**Purity** (1) Heavy metals Not more than 20  $\mu\text{g/g}$  of L-alanine ( $C_3H_7NO_2$ ) as Pb.

Test Solution Weigh the amount of L-Alanine Solution equivalent to 1.0 g of L-alanine ( $C_3H_7NO_2$ ), add about 40 ml of water, and then add 2 ml of acetic acid (1 : 20) and add water to make 50 ml.

Control Solution To 2.0 ml of Lead Standard Solution, add 2 ml of acetic acid (1 : 20), and add water to make 50 ml.

(2) Arsenic Not more than 4.0  $\mu\text{g/g}$  of L-alanine ( $C_3H_7NO_2$ ) as  $As_2O_3$ .

Test Solution Weigh the amount of L-Alanine Solution equivalent to 0.5 g of L-alanine ( $C_3H_7NO_2$ ), add 5 ml of water, and dissolve while heating if necessary.

Apparatus Apparatus B

**Residue on Ignition** Not more than 0.20% on the basis of L-alanine ( $C_3H_7NO_2$ ).

**Assay** Weigh accurately an amount of L-Alanine Solution equivalent to about 0.2 g of L-alanine ( $C_3H_7NO_2$ ), and proceed as directed under the Assay for L-Asparagine.

1 ml of 0.1 mol/l perchloric acid = 8.909 mg  $C_3H_7NO_2$