

## Testing method for L-Carnitine Base

### 1. Specific rotation:

10g of L-Carnitine Base, accurately weighted, dissolved in 100ml volumetric flask, make up 10% water solution, calculate the specific rotation, then calculate according to the calculating formula.

2. PH: make up 5% water solution (1:20) PH should be 5.5-9.5.

### 3. water content:

Take L-Carnitine, properly weighted, at  $100^{\circ}\text{C}$  -  $105^{\circ}\text{C}$  for 3 hours, lost weight should be less than 4%.

### 4. Residue on ignition:

Take 1g of L-Carnitine Base, to a crucible of have been ignition to constant weight, ignition at  $600^{\circ}\text{C}$  to constant temperature. Residue on ignition should be less than 0.5%.

### 5. Heavy metal:

1g of L-Carnitine Base, two colorimetric tube.

Tube A: Add 1ml of standard solution of lead, mixture with 2ml of acetate (PH 3.5), dilute into 25ml with water.

Tube B: Add 25ml of test solution, then adding 2ml of thioacetamide into each of two Tube, wave the tube, lay up for 2 minutes, put two tube on white paper, compare the Solution colour of two tube, colour of tube B should not be more deep than colour of Tube A. Heavy metal should be less than 10ppm.

#### 6. chloride:

1g sample, dissolved in 50ml volumetric flask with water, add 2 drops of potassium chromate, titrate with 0.1mol/L silver nitrate from light green to light red, each 1ml silver nitrate is equivalent to 3.545mg chloride, less than 0.4%.

#### 7. Assay:

0.12g of L-Carnitine Base, accurately weighted, add 3ml of formic acid, add 50ml of glacial acetic acid, make it dissolved, add 2 drops of crystal violets TS, titrate with 0.1mol/L perchloric acid to blue endpoint. Perform a blank determination, and make any necessary correction.

Each 1ml(0.1mol/L) perchloric acid is equivalent to 16.121mg L-Carnitine, assay Should be 98%–102%.