L-Cystine (From non-animal source)
Meets BP 2016 testing specifications

Product Code: TC070B

Product Description:
Molecular weight: 240.30
Molecular formula: $\text{C}_6\text{H}_{12}\text{N}_2\text{O}_4\text{S}_2$
CAS No.: 56-89-3
Synonym: (R,R)-3,3′-Dithiobis(2-aminopropionic acid)

Quality Control:

Appearance
White or almost white, crystalline powder

Solubility
Practically insoluble in water and in ethanol (96%). It dissolves in dilute solutions of alkali hydroxides

Identification A: Specific optical rotation
-224.00 to -218.00° (c= 2% in 1M HCl acid at 25°C)

Identification B: FTIR
Matches with the standard pattern

Identification C
The principal spot in the chromatogram obtained with the test solution is similar in position, colour and size to the principal spot in the chromatogram obtained with the reference solution

Identification D
Turbidity or a white precipitate develops within 3 min.

Appearance of solution
10% solution in dilute hydrochloric acid R is clear and not more intensely coloured than reference solution Y7

Specific optical rotation
224.00 to 218.00° (c= 2% in 1M HCl acid at 25°C)

Ninhydrin-positive substances, system suitability:
Resolution
min. 1.5 between the peaks due to isoleucine and leucine

Any ninhydrin-positive substances, for each impurity
<= 0.20%

Chloride (Cl)
<= 0.02%

Sulfate (SO4)
<= 0.03%

Ammonium (Amino acid analysis)
<= 0.02%

Iron
<= 0.0010%

Loss on drying
<= 0.50 (at 105°C, 2hr)

Sulfated ash
<= 0.10%

Assay (Iodometry, dried basis)
98.50 -101.00%

Storage and Shelf Life:
Store below 30°C away from bright light.
Self life is 48 months.
Use before expiry date given on the product label.

Disclaimer:
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