

L-Isoleucine

(From non-animal source)

Cell Culture Tested

Product Code: TC049

Product Description :

Molecular Weight: 131.2

Molecular Formula: $C_6H_{13}NO_2$

CAS No.: 73-32-5

Synonym: 2-Amino-3-methylpentanoic acid

L-Isoleucine is a non-polar hydrophobic, essential α -amino acid that is chemically neutral in nature. It is an isomer of Leucine.

It is used as a major component in wide range of cell culture media including classical and serum-free media. Some major functions of L-Isoleucine in cell culture involves inner core folding of proteins due to its non-polar hydrophobic side chain.

Isoleucine serves as precursor for glutamine and alanine and thus has a role in energy generation. Depriving cells from Isoleucine in culture medium leads to synchronization of cell cycle at G1 phase and DNA synthesis is stopped in S phase. Both these events are resumed on adding L-Isoleucine back to the medium.

Directions :

Preparation instructions:

L-Isoleucine is soluble in 1M hydrochloric acid (50mg/ml). Intermittent heating may be required to dissolve the powder completely.

Quality Control:

Appearance

White crystals or shiny flakes or crystalline powder.

Solubility

Clear colorless solution at 5gm in 100ml of 1M hydrochloric acid.

pH of 1% solution in water

5.50 -7.00

Specific Rotation [α] 20/D

+38.9° to +41.8°

FTIR

Matches with the standard pattern

Melting range

283 - 293°C

Loss on drying (105°C; 3 h)

NMT 0.5%

Assay

99.00% - 101.00%

Cell Culture Test

Passes

Storage and Shelf Life:

Store at room temperature away from bright light.

Use before expiry date given on product label.

Revision : 0 / 2016