

L-Arginine

(From non-animal Source)
Cell Culture Tested

Product Code: TC052

Product Description :

Molecular Weight: 174.20

Molecular Formula: $\text{H}_2\text{NC}(=\text{NH})\text{NH}(\text{CH}_2)_3\text{CH}(\text{NH}_2)\text{CO}_2\text{H}$
CAS No.: 74-79-3

Synonym: (S)-2-Amino-5-guanidinopentanoic acid

L-Arginine is a semi- essential proteinogenic amino acid. It is hydrophilic in nature due to basic side chain. It is biosynthesized in the kidneys from ornithine via citrulline using the precursor glutamate.

L-Arginine plays an important role in the survival and propagation of mammalian cell cultures *in vitro*. It maintains active rates of cellular proliferation without renewal of medium. L-Arginine has key role in preventing toxicity resulting either from excessive quantities of essential amino acids or from ammonia. In cultured cells, it serves as a precursor for the synthesis of nitric oxide (NO), an activator of guanylyl cyclase leading to production of secondary messenger, cGMP. L-Arginine is also directly involved in maturation of B-cells.

Directions :

Preparation instructions:

L-Arginine is soluble in water (100mg/ml). Solutions can be sterilized by autoclaving or filtering through sterile membrane filter of porosity 0.22microns.

Quality Control:

Appearance

White powder.

Solubility

Clear colorless solution at 10gm in 100ml of water .

pH of 5% solution in water

10.50 -12.00

FTIR

Matches with the standard pattern

Specific rotation [α]_{20/D}

+26.9° to +27.9°

Melting range

217- 227 °C

Loss on drying

NMT 0.5%

Assay

98.00%- 101.50%

Cell Culture Test

Passes

Storage and Shelf Life:

Store at room temperature away from bright light.

Use before expiry given on product label.

Aqueous solutions of this product are strongly alkaline and tend to absorb carbon dioxide from the atmosphere when exposed to air.

Revision : 1 / 2011

Disclaimer :

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