



# L-Ascorbic acid

Vitamin C Cell Culture Tested

## Product Code: TC094

## **Product Description :**

Molecular Weight:176.12 Molecular Formula: C6H8O6 CAS No.: 50-81-7 Synonyms: L-Threoascorbic acid, Antiscorbutic factor, Vitamin C

L-ascorbic acid, also known as vitamin C is an essential micronutrient for normal growth and maintenance of cultured cells. It is used as a component of many classical and serum-free cell culture media.

Functions of L-ascorbic acid in cell culture systems:

• Promotes proliferation of some tumor cell lines as well as primary cells.

• In reactive oxygen species, it acts as a antioxidant.

• Acts as a cofactor in hydroxylation of lysine and proline residues in collagen and is essential for its normal synthesis and secretion

• In combination with other molecules such as dexamethasone, IBMX and beta-glycerophosphate, ascorbic acid regulates the differentiation of mesenchymal stem cells into osteocytes and adipocytes

However, L-ascorbic acid is very unstable in aqueous solutions and at elevated temperatures. Its stability in culture media varies with media composition, oxygen supply, cell type and cell density.

High doses of ascorbic acid may be detrimental to cultured cells, particularly in serum-free media. Consequently, supplementation of media with ascorbic acids should be carefully standardized.

## **Directions :**

### Preparation instructions:

L-ascorbic acid solution should be sterilized by filtering through a membrane filter with porosity 0.22 microns or less. Do not autoclave or heat.

## **Quality Control:**

**Appearance** White to yellow powder.

#### Solubility

Clear colorless to light yellow solution at 5gm in 100ml of water .

**pH of 5% solution in water** 2.10 -2.70

**Specific rotation [alpha]20/D** +20.5° to +21.5°

Iron (Fe) NMT 0.0002%

**Residue on ignition** NMT 0.1%

Assay NLT 99.00%

Cell Culture Test Passes

## Storage and Shelf Life:

Store at 10°-30°C. Shelf life is 36 months. Use before expiry date given on the product label.

#### Disclaimer :

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