

Tri-sodium citrate dihydrate

Cell culture tested

Product Code: TC249

Product Description :

Molecular Weight: 294.10

Molecular Formula: $\text{Na}_3\text{C}_6\text{H}_5\text{O}_7 \cdot 2\text{H}_2\text{O}$

CAS No.: 6132-04-3

Synonym: Citric acid trisodium salt dihydrate

Sodium citrate dihydrate is a non-toxic, neutral salt of citric acid. Citric acid is a key intermediate of Tricarboxylic acid cycle that acts as a central linking point for carbohydrate, fat, and protein metabolism. Sodium citrate also upregulates proteins that assist in ribosome formation and protein folding.

Sodium citrate dihydrate is used as a buffering agent of choice for biological reactions due to its ability to maintain a constant pH. Sodium citrate buffer finds wide application in heat-induced epitope retrieval of antigens from paraffin embedded tissue sections, thus overcoming the drawbacks of enzymatic retrieval method. It is used as an anticoagulant due to its ability to complex with calcium ions and make them unavailable for participation at various key points in the coagulation pathway.

In cell culture applications, sodium citrate is used to harvest cells during chromosome karyotyping. Hypotonic sodium citrate solution induces cell swelling by creating a concentration gradient across the cytoplasmic membrane, thus aiding the metaphase spread. Sodium citrate formulated as a hypertonic solution, gently and efficiently detaches adherent cultures of human pluripotent stem cells as small multicellular aggregates with minimal manual intervention.

Directions :

Preparation instructions:

For cell culture applications, tri-sodium citrate dihydrate solution can be prepared as per required concentrations in water.

Solutions can be sterilized by filtering through a sterile membrane filter with a porosity of 0.22 microns or less.

Quality Control:

Appearance

White crystalline powder

Solubility

Clear colorless solution at 10gm in 100 ml of water

pH of 5% solution in water

7.50 -9.00

Assay

NLT 99.00%

Cell Culture Test

Passes

Storage and Shelf Life:

Store powder at room temperature in air tight containers. Sterile solutions are stable and can be stored at room temperature.

Use before expiry date given on product label.

Revision : 0 / 2015

Disclaimer :

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