

Tris hydrochloride

Tris (hydroxymethyl) aminomethane hydrochloride
Cell Culture Tested

Product Code: TC073

Product Description :

Molecular Weight: 157.60

Molecular Formula: $\text{NH}_2\text{C}(\text{CH}_2\text{OH})_3 \cdot \text{HCl}$

CAS No: 1185-53-1

Synonyms: TRIS HCl TRIS hydrochloride
Tris(hydroxymethyl)aminomethane hydrochloride

Tris HCl has a pKa of 8.08 at 25°C and pH range of 7.0 to 9.0 that coincides with the physiological pH of most living organisms because of which it is commonly used as a component of buffer solutions in biology, biochemistry and molecular biology applications. Tris salts are also used for crystallization of proteins at various pH values. Neither Tris base nor Tris hydrochloride by itself provide adequate buffering capacity. Generally the two need to be mixed together to provide a buffer with pH between 7 and 9 to provide adequate buffering.

Effect of temperature on pH of Tris solutions:

As temperature of Tris solutions decreases from 25°C to 5°C, pH value increases with an average of 0.03 units per °C. As temperature of Tris solutions increases from 25°C to 37°C, the pH decreases with an average of 0.025 units per °C.

Effect of concentration of Tris solutions on pH:

Increase in the total Tris concentration from 0.05M to 0.5M leads to increase in pH by about 0.05 whereas decrease in concentration from 0.05M to 0.005M leads to decrease in pH by about 0.05.

Directions :

Preparation instructions:

Tris hydrochloride is soluble in water. Tris hydrochloride solutions can be sterilized by autoclaving or by filtering through a sterile membrane filter with porosity of 0.22 microns.

Quality Control:

Appearance

White crystalline powder.

Solubility

Clear colorless solution at 60gm in 100ml of water .

pKa at 20°C

8.3 ± 0.15

Residue on ignition

NMT 0.1%

Loss on drying

NMT 0.3%

Assay

NLT 98.00%

Cell Culture Test

Passes

Storage and Shelf Life:

Store at 10°-30°C.

Shelf life of the product is 48 months.

Use before expiry date given on the product label.

Disclaimer :

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