

Cefotaxime Solution 100 mg/mL

Synonym: (6R,7R)-3-[(Acetyloxy)methyl]-7-[[[(2Z)-(2-amino-4-thiazolyl)(methoxyimino)acetyl]amino]-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic Acid, Sodium Salt

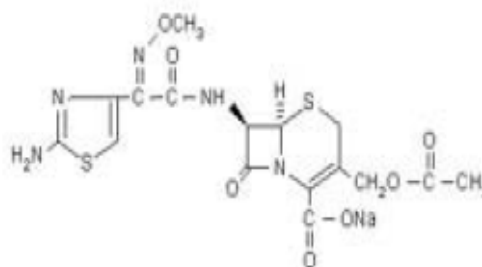
CAS: 64485-93-4

Formula: $C_{16}H_{16}N_5O_7S_2Na$

Molecular Wt: 477.4

Properties

Form:	Liquid
Appearance:	Light Yellow
Application:	Plant Tissue Culture Antibiotic
Solubility:	Miscible with Water
Storage Temp:	-20 to 0 °C
Typical Working Concentration:	50 to 250 mg/mL
Storage Temp of Stock Solution:	Aqueous solution at a pH 4.5-6.2 is stable for 7-14 days when stored at 2 to 6 °C. Recommended long term storage at -20 °C (i.e., non-frost freezer)



Application Notes

Cefotaxime is an inhibitor of cell wall synthesis and chemically related to penicillin. It is highly effective against Gram-negative bacteria¹. Cefotaxime is often used in transformation research for the elimination of *Agrobacterium tumefaciens*. Additionally, cefotaxime also has stimulatory effect. It is founded that addition of cefotaxime to medium enhances shoot organogenesis *in vitro* for many plants (apple, barley, grain, maize, etc.).^{2,3}

A concentration of 90 µg/mL is recommended to achieve microbe toxicity. Cefotaxime concentrations should not exceed 100 µg/mL in order to avoid toxicity for plants (though plant toxicity may be higher or lower than 100 µg/mL for different plant species).

Please Note: While *PhytoTechnology Laboratories*® tests each lot of this product with two or more plant cell/ tissue culture lines, it is the sole responsibility of the purchaser to determine the appropriateness of this product for the specific plants that are being cultured and applications that are being used.

References

1. Merck 13, 1946
2. Danilova, S.A., Yu. I. Dolgikh. 2004. The stimulatory effect of the antibiotic cefotaxime on plant regeneration in maize tissue culture. *Russian Journal of Plant Physiology*. 51. pp 559 -562.
3. Rao, A.m., K. Padma Sree, and P.B. 1995. Kavi Kishor. Enhanced plant regeneration in grain and sweet sorghum by asparagines, proline and cefotaxime. *Plant Cell Reports*. 15. pp 72-75.