

5 mg/ml Ampicillin Trihydrate Stock Solution

Instructions

1. Weigh 0.05 g of Ampicillin Trihydrate ([Ampicillin Trihydrate, GoldBio Cat# A-303](#) [CAS 7177-48-2, mw. = 403.45 g/mol]).
2. Add 10 ml of sterile H₂O. Dissolve completely

Alternatively: Ampicillin Trihydrate is more freely soluble in dilute acidic or basic solution (>50 mg/ml), but can degrade quickly so prepare solutions fresh in 1M ammonium hydroxide or 1M HCl if a higher concentration stock solution is desired.

3. Prewet a 0.22 µm syringe filter by drawing through 5-10 ml of sterile H₂O and discard water.
4. Sterilize Ampicillin stock through the prepared 0.22 µm syringe filter.
5. Stock may be stored in small aliquots at -20°C for 6 months or -70°C for up to 1 year.

References

Hou, Joseph P., and John W. Poole. "Kinetics and mechanism of degradation of ampicillin in solution." *Journal of pharmaceutical sciences* 58.4 (1969): 447-454.

Liu, Chen-Lun, et al. "Total solubility determination of mixtures containing ampicillin anhydrate and ampicillin trihydrate." *Journal of the Chinese chemical society* 53.4 (2006): 851-856.

Okerman, Lieve, Johan Van Hende, and Lieven De Zutter. "Stability of frozen stock solutions of beta-lactam antibiotics, cephalosporins, tetracyclines and quinolones used in antibiotic residue screening and antibiotic susceptibility testing." *Analytica chimica acta* 586.1 (2007): 284-288.