

Streptomycin 100 mg/ml EZ-Pak™ Protocol

Introduction

Streptomycin is an aminoglycoside antibiotic primarily effective against gram-negative bacteria and *Mycobacterium* species. It is commonly used in cell culture media to prevent bacterial contamination. It has also been used to precipitate nucleic acids during protein purification techniques and to study mechanisms of Streptomycin resistance.

Aminoglycoside antibiotics are composed of amino groups attached to glycosides. They bind the 30s ribosomal subunit, causing misreading of the mRNA sequence and inhibition of translocation. Consequently, protein synthesis is inhibited. Resistance to this antibiotic is conferred through mutations in the *rpsL* gene.

The Streptomycin Sulfate EZ Pak™ is the fastest and easiest way to make a set amount of sterile streptomycin sulfate solution. The kit includes pre-weighed streptomycin sulfate powder, a sterile filter and a sterile container for the filtered solution. No need to calculate, simply add the stated amount of deionized H₂O, filter, and pour into the labeled bottle for easy usage. The EZ Pak™ includes high-quality GoldBio streptomycin sulfate, and the sterile solution is ready for tissue culture, bacterial media or any number of uses.

Materials

- 1 Bottle of Streptomycin Sulfate powder
- 1 Sterile empty bottle for solution
- 1 Sterile Filter (and syringe for EZ10)

Method

Reconstitution Protocol

1. Warm Streptomycin powder bottle to Room Temperature
2. Add specified volume of dH₂O to Streptomycin powder bottle.

| Product Catalog # | Volume of H ₂ O to Add | Final Volume |
|-----------------------------|-----------------------------------|--------------|
| S-150-EZ10 | 9.2 ml | 10 ml |
| S-150-EZ25 | 23.0 ml | 25 ml |
| S-150-EZ50 | 46.0 ml | 50 ml |
| S-150-EZ100 | 92.0 ml | 100 ml |

3. Mix until all product goes into solution.
4. Sterile Filter:
 - a. For S-150-EZ10-
 - i. Remove syringe from packaging.
 - ii. Carefully remove top of sterile filter packaging.
 - iii. Aspirate as much solution as possible into syringe.
 - iv. Screw the Leur end of the syringe into the top of the sterile filter.
 - v. Carefully place the filter assembly above the empty bottle, and slowly depress the syringe plunger. Allow all the solution to flow through the filter.
 - vi. Once all solution has been filtered, close the top of the solution bottle and store at -20°C. Make aliquots if desired. Discard filter and syringe.
 - b. For S-150-EZ25, EZ50, and EZ100-
 - i. Remove vacuum filter from packaging.
 - ii. Attach vacuum hose according to instructions on filter packaging.
 - iii. Add solution to the upper cup of the filter.
 - iv. Apply vacuum pressure and let all the solution in the top cup flow through the filter into the bottom cup. Stop vacuum when all solution is filtered.
 - v. Remove vacuum attachment from the filter and close the bottle with the provided sterile cap.
 - vi. Tightly seal solution bottle and store at -20°C. Make aliquots if desired. Discard filter.
5. Use Streptomycin at a final concentration of 50 µg/ml.