

Kanamycin 50 mg/ml EZ-Pak™ Protocol

Introduction

Kanamycin is an aminoglycoside antibiotic isolated from *Streptomyces kanamyceticus*. It is effective against gram-positive and gram-negative bacteria as well as *Mycoplasma* species. Kanamycin is commonly used to select for bacteria that have been transformed with a kanamycin-resistant gene and plant tissues that have the *NPT II (APH3)* gene incorporated in them. Kanamycin is very soluble in aqueous solution and is typically used in concentrations of 50-100 µg/ml.

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.

The Kanamycin Monosulfate EZ Pak™ is the fastest and easiest way to make a set amount of sterile kanamycin monosulfate solution. The kit includes pre-weighed kanamycin monosulfate 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 kanamycin monosulfate and the sterile solution is ready for tissue culture, bacterial media, or any number of uses.

Materials

- 1 Bottle of Kanamycin powder
- 1 Sterile empty bottle for solution
- 1 Sterile Filter

Method

Reconstitution Protocol

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

Product Catalog #	Volume of H ₂ O to Add	Final Volume
K-120-EZ25	23.75 ml	25 ml
K-120-EZ50	47.5 ml	50 ml

K-120-EZ100	95.0 ml	100 ml
-----------------------------	---------	--------

3. Mix until all product goes into solution.
4. Sterile Filter:
 - a. For K-120-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 filter and close bottle with provided sterile cap.
 - vi. Tightly seal solution bottle and store at -20°C. Make aliquots if desired. Discard filter.
5. Use Kanamycin at a final concentration of 50 µg/ml.