

## Protocol for Preparing 50 mg/mL Kanamycin Stock Solution (1 mL Aliquots)

### Materials:

- Kanamycin sulfate powder
  - Deionized water (DI water)
  - Sterile 1.5 mL microcentrifuge tubes
  - 0.22  $\mu\text{m}$  sterile syringe filter or 0.22  $\mu\text{m}$  sterile filter unit
  - Pipettes and sterile tips
  - Scale for weighing
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### Steps:

1. **Weigh the kanamycin sulfate:**
    - Measure **0.05 g** of kanamycin sulfate powder using a clean, calibrated scale.
  2. **Dissolve in deionized water:**
    - Transfer the kanamycin powder into a sterile container.
    - Add **1 mL** of deionized water to the kanamycin powder.
    - Gently mix by pipetting up and down or vortex until the kanamycin is fully dissolved.
  3. **Sterilize the solution:**
    - Use a **0.22  $\mu\text{m}$  sterile filter** to sterilize the kanamycin solution. Draw the solution into a syringe, attach the filter, and expel the solution into a sterile microcentrifuge tube.
  4. **Aliquot the solution:**
    - Pipette **1 mL** of the sterilized 50 mg/mL kanamycin solution into each sterile 1.5 mL microcentrifuge tube.
  5. **Label the aliquots:**
    - Clearly label each tube with "50 mg/mL Kanamycin," the date, and your initials.
  6. **Storage:**
    - Store the aliquots at **-20°C** for long-term use. Aliquots can be thawed as needed.
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### Note:

- Kanamycin is stable for several months when stored at -20°C. Avoid repeated freeze-thaw cycles by only thawing the aliquot needed.