

Stock solutions

Making stock solutions of Dox, Tetrathionate, IPTG and antibiotic stocks.

Estimated bench time: 120 min

Estimated total time: 2 hours

MATERIALS

- 1.5 mL Eppendorf tubes
- 50 mL Conical tubes
- Pipettes + tips
- Filter + syringe
- MiliQ or ddH₂O
- Bunsen flame
- Kanamycin
- Chloramphenicol
- Spectinomycin
- IPTG
- Tetrathionate
- Dox

SETUP & PROTOCOL

Antibiotics:

1. Work near the Bunsen flame.
2. Kanamycin: dissolve kanamycin in MiliQ water for a concentration of 30 mg/mL and filter-sterilize the solution.
3. Chloramphenicol: dissolve chloramphenicol in 70% ethanol for a concentration of 25 mg/ml and filter-sterilize the solution.
4. Spectinomycin: dissolve spectinomycin in MiliQ for a concentration of 50 mg/mL and filter-sterilize the solution.

Stocks:

1. IPTG: Make the following concentrations:
 - 0.1 M by dissolving 0.24 grams in 1 mL ddH₂O and mix by inversion
 - 100 mM by mixing 0.1 mL of 0.1M stock and 0.9 mL ddH₂O
 - 10 mM by mixing 0.1 mL of 100mM stock and 0.9 mL ddH₂O
 - 1 mM by mixing 0.1 mL of 10 mM stock and 0.9 mL ddH₂O
 - 0.1 mM by mixing 0.1 mL of 1mM stock and 0.9 mL ddH₂O

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- Kanamycin
- Chloramphenicol
- Spectinomycin
- IPTG
- Tetrathionate
- Dox

SETUP & PROTOCOL

Stocks:

2. Dox: Make the following concentrations:

- 250 µg/mL by dissolving 2.5 milligrams in 10 mL and filter sterilize it near the flame
- 100 µg/mL by mixing 0.4 mL of 250 µg/mL stock and 0.6 mL ddH₂O
- 10 µg/mL by mixing 0.4 mL of 100 µg/mL stock and 0.6 mL ddH₂O
- 1 µg/mL by mixing 0.4 mL of 10 µg/mL stock and 0.6 mL ddH₂O
- 0.1 µg/mL by mixing 0.4 mL of 1 µg/mL stock and 0.6 mL ddH₂O
- 0.01 µg/mL by mixing 0.4 mL of 0.1 µg/mL stock and 0.6 mL ddH₂O

3. Tetrathionate: Make the following concentrations:

- 66700 µM by dissolving 0.61 grams in 30 mL ddH₂O and mix by inversion
- 6670 µM by mixing 1.5 mL of 66700 µM stock and 13.5 mL ddH₂O
- 667 µM by mixing 1.5 mL of 6670 µM stock and 13.5 mL ddH₂O
- 66.7 µM by mixing 1.5 mL of 667 µM stock and 13.5 mL ddH₂O
- 6.67 µM by mixing 1.5 mL of 66.7 µM stock and 13.5 mL ddH₂O