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(Epstein, Kim, Schanke) Trial K⁺ Minimal Media Recipe

Elizabeth Fozo¹¹In-house protocol

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Works for me

This protocol is published without a DOI.



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ABSTRACT

Trial K⁺ Minimal Media Recipe

PROTOCOL CITATION

Elizabeth Fozo 2020. (Epstein, Kim, Schanke) Trial K⁺ Minimal Media Recipe. [protocols.io](https://protocols.io/view/epstein-kim-schanke-trial-k-minimal-media-recipe-bqmzmu76)
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KEYWORDS

Trial K⁺ Minimal Media, K⁺ Media

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GUIDELINES

Original Epstein recipe

1L recipe

250mL recipe

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BEFORE STARTING

Original Epstein recipe calls forNa₂HPO₄, 46 mM - MW (141.96)NaH₂PO₄, 23 mM - MW (119.98)

(NH₄)₂SO₄, 8 mM - MW (132.14) –**want 4mM in our recipe so does not interfere with probe**
MgSO₄, 0.4 mM - MW (120.37)
FeSO₄, 6uM- MW (151.91)
sodium citrate, 1 mM - MW (258.068)
thiamine hydrochloride, 1 mg/liter;
Glycerol, 0.4% (0.4% glucose for control)
50 mg/L of each of the 18 natural L-amino acids.

1L recipe

- 1 Rinse the beaker with DI H₂O
Fill to ~900mL MiliQ water
Set to mix, no heat.
Choose between:
 - In media room/dry goods
 - Above lab benches
 - In the fridge
Fill to 1L with MiliQ and mix till dissolved (can be on low heat)
Check pH (should be ~7), [K⁺] (normally ~8 ppm), and filter
- 2 In media room/dry goods
6.5302g/L of Na₂HPO₄
3.16 g/L of NaH₂PO₄
0.52855 g/L of (NH₄)₂SO₄
500mg of amino acid mix 3
- 3 Above lab benches
MgSO₄, 400uL of 1M stock - 0.4 mM
5mL of 10mg/mL amino acid mix 1 - 50 mg/L
5mL of 10mg/mL amino acid mix 2 - 50 mg/L
Glycerol, 5mL of 80% stock - 0.4%
sodium citrate, 1mL of stock of 1M - 1 mM
- 4 In fridge
0.1mL of 10mg/mL Thiamine - 1 mg/L
FeSO₄, 600uL of stock of 10 mM - 6uM

250mL recipe

- 5 Rinse the beaker with DI H₂O
Fill to ~200mL MiliQ
Set to mix, no heat
Choose between:
 - In media room/dry goods
 - Above lab benches
 - In the fridge
Fill to 250mL with MiliQ and mix till dissolved (can be on low heat)
Check pH (should be ~7), [K⁺] (normally ~8 ppm), and filter
- 6 In media room/dry goods
1.633g of Na₂HPO₄
0.79g of NaH₂PO₄
0.132g of (NH₄)₂SO₄
125mg of amino acid mix 3
- 7 Above lab benches
MgSO₄, 100uL of 1M stock - 0.4 mM
1.25mL of 10mg/mL amino acid mix 1 - 50 mg/L
1.25mL of 10mg/mL amino acid mix 2 - 50 mg/L
Glycerol, 1.25mL of 80% stock - 0.4%

(glucose control, 5mL 20% stock)
sodium citrate, 250uL of stock of 1M - 1 mM

8 In fridge

25uL of 10mg/mL Thiamine - 1 mg/L
FeSO₄, 150uL of stock of 10 mM - 6uM