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We use this protocol and it's working

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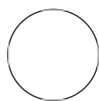
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Yeast Peptone Dextrose (YPD) medium

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ABSTRACT

Yeast peptone dextrose is a medium composition used to grow many common yeasts, among others *Saccharomyces cerevisiae*. Glucose is the primary carbon and energy source, while nitrogen and essential amino acids are provided by the yeast extract and peptone. It is nonselective and the addition of protein and yeast extract allows faster growth so that during exponential or log-phase growth, the cells divide every 90 minutes in *S. cerevisiae*.

GUIDELINES

Follow step by step, unless stated otherwise. Equipment needed should be standard to a microbiology lab.

MATERIALS

Analytical scale, autoclave, bottle(s), weight vessel, LAF bench

SAFETY WARNINGS



You can mix Dextrose from the beginning with the other compounds, and autoclave together. While this is more time efficient and easier, it is important to take into account the possibility of toxic byproducts produced by the Millard reaction when autoclaving, producing Acrylamide, a probable human carcinogen (IARC Group 2A). Furthermore, when removing autoclaved components, be sure to take care as these can be very hot. If using antibiotics, use sufficient PPE to protect yourself, as some can be toxic to humans.

BEFORE START INSTRUCTIONS

Prepare glassware by cleaning it, and ensure that scale is sufficiently calibrated

- 1 All compounds are measured using a high precision analytical scale from powdered compounds. Each compound is measured to within 1% of the target weight. All compounds are mixed in a Duran bottle


100 mL Dextrose solution

- 1.1 Fill the bottle with  60 mL double-distilled water

1.2 Measure  10000 mg Dextrose


Powdered compounds:

 Dextrose **Sigma-aldrich Catalog #G7021**

1.3 Add powdered solids into bottle, and use a magnetic mixer with a stir bar to mix for  00:05:00

5m

1.4 Adjust pH while mixing to  5.8 using concentrated sodium hydroxide

1.5 Add distilled water to a total of  100 mL

1.6 Autoclave liquid at  121 °C for  00:15:00

15m

2 All compounds are measured using a high precision analytical scale from powdered compounds. Each compound is measured to within 1% of the target weight. All compounds are mixed in a Duran bottle

500 mL YPD (broth) medium


2.1 Fill the bottle with  300 mL double-distilled water

2.2 Measure  10000 mg Peptone and  5000 mg Yeast extract

Powdered compounds:

 Peptone **Sigma-aldrich Catalog #P5905**

 Yeast Extract **Sigma-aldrich Catalog #Y0875**

2.3 Add powdered solids into bottle, and use a magnetic mixer with a stir bar to mix for  00:05:00


5m

2.4 Adjust pH while mixing to  5.8 using concentrated sodium hydroxide

2.5 Autoclave liquid at  121 °C for  00:15:00

15m

2.6 In a LAF bench, add  100 mL sterile Dextrose solution


2.7 Add sterile water to a total of  500 mL



Note

Cool to 50°C and supplement with antibiotics as appropriate

3 All compounds are measured using a high precision analytical scale from powdered compounds. Each compound is measured to within 1% of the target weight. All compounds are mixed in a Duran bottle

500 mL YPD (agar) medium

3.1 Fill the bottle with  300 mL double-distilled water


3.2 Measure  10000 mg Peptone,  5000 mg Yeast extract and  7500 mg agar

Powdered compounds:

 Peptone **Sigma-aldrich Catalog #P5905**

 Yeast Extract **Sigma-aldrich Catalog #Y0875**

 Agar **Sigma-aldrich Catalog #A1296**

3.3 Add powdered solids into bottle, and use a magnetic mixer with a stir bar to mix for  00:05:00


5m

3.4 Adjust pH while mixing to  5.8 using concentrated sodium hydroxide

3.5 Autoclave liquid at  121 °C for  00:15:00

15m

3.6 In a LAF bench, add  100 mL sterile Dextrose solution

3.7 Add sterile water to a total of  500 mL

Note

Cool to 50°C and supplement with antibiotics as appropriate

Agar can be stored, then reheated to 50°C to be poured