



Nov 13, 2023

Rye Broth Recipe

DOI

dx.doi.org/10.17504/protocols.io.x54v9pwp4g3e/v1

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Protocol Citation: Diana Lee 2023. Rye Broth Recipe. **protocols.io**
<https://dx.doi.org/10.17504/protocols.io.x54v9pwp4g3e/v1>

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Protocol status: Working

We use this protocol and it's working

Created: November 08, 2023



Last Modified: November 13, 2023

Protocol Integer ID: 90594

Keywords: Rye broth, Phytophthora growth media, Pythium growth media, Oomycetes growth media, broth recipe this method, broth recipe, broth for use, rye flour, based broth, rye, broth, careful mixing of ingredient, systematic preparation, ingredient, preparation, careful mixing, microbiological culture, dichloromethane

Abstract

This method describes the systematic preparation of a Rye-Based Broth for use in microbiological cultures. The broth consists of rye flour, sucrose, and, optionally, B-sitosterol dissolved in dichloromethane. The method involves the careful mixing of ingredients, filtration, and handling of dichloromethane (optional), followed by autoclaving to sterilize the broth.

Troubleshooting

Preparation of Rye-Based Broth

- 1 In a 1.5-liter beaker or jug, combine 60 g of rye flour and 20 g of sucrose with 500 ml of water.
- 2 Mix the contents thoroughly.
- 3 Add 500 ml of boiling water to the mixture. Avoid boiling the solution, as starch may cause viscosity.
- 4 Stir the mixture occasionally for the next 30 minutes to keep the flour in suspension. If using a magnetic stirrer, employ gentle stirring to prevent excessive foaming.

Filtration

- 5 Filter the solution using a fine sieve, avoiding the use of filter paper.
- 6 Optionally, for a clear broth, transfer the solution into a 1-liter measuring cylinder and allow it to settle for a few hours to remove rye flour grit. *

Incorporation of B-sitosterol (Optional)

7 *

Dissolve the B-sitosterol in a small volume of dichloromethane, ensuring complete dissolution.

Note

Handle dichloromethane with glassware, avoiding plasticware.
Use a glass pasteur pipette for transferring the dichloromethane solution.

- 8 Rapidly add the dissolved B-sitosterol to the rye broth, as dichloromethane evaporates quickly.



- 9 Employ a magnetic stirrer to gently stir the mixture, ensuring homogeneity

Autoclaving

- 10 Due to the tendency of the rye broth to overflow in the autoclave, fill the Schott bottle no more than half full.

Note

Place the Schott bottle inside a metal container to contain potential overflows.