

[Manuals.plus](#) /

- › [ES EVVIVA SCIENCES](#) /
- › ES EVVIVA SCIENCES Nutrient Agar Powder EV38 Instruction Manual

ES EVVIVA SCIENCES EV38

ES EVVIVA SCIENCES Nutrient Agar Powder EV38 Instruction Manual

Model: EV38 | Brand: ES EVVIVA SCIENCES

1. INTRODUCTION

The ES EVVIVA SCIENCES Nutrient Agar Powder (Model EV38) is a high-quality, versatile growth medium designed for cultivating a wide range of microorganisms. This 500-gram container provides enough powder to prepare approximately 900 to 1000 agar petri dishes, making it ideal for home use, classroom experiments, and science fair projects. This manual provides detailed instructions for preparing and utilizing the nutrient agar to ensure successful and educational microbiology experiments.



Image: Superior quality nutrient agar powder and a prepared agar plate.

2. IMPORTANT SAFETY INFORMATION

Please read and understand all safety precautions before beginning any experiments. This product is for laboratory and educational use only and is not intended for human or animal consumption.

- **Not for Consumption:** Nutrient agar is formulated to promote microbial growth and contains ingredients not suitable for eating. Do not ingest.
- **Adult Supervision:** Experiments should always be conducted under the supervision of a responsible adult, especially when involving heating or sterilization processes.
- **Sterilization:** Proper sterilization of equipment and media is crucial to prevent unwanted contamination.
- **Handling Microorganisms:** Always treat cultured plates as potential biohazards. Avoid opening plates unnecessarily after inoculation. Wash hands thoroughly before and after handling.
- **Disposal:** Dispose of all used petri dishes and contaminated materials properly. It is recommended to sterilize used

plates (e.g., by autoclaving or boiling) before disposal to kill any cultured microorganisms.

3. PRODUCT CONTENTS

Your ES EVVIVA SCIENCES Nutrient Agar Powder package contains:

- 500 Grams of Nutrient Agar Powder (Model EV38)
- Access to an Experiment Ebook (details provided on product label or via support)



Image: 500g Nutrient Agar Powder container.

4. SETUP: PREPARING NUTRIENT AGAR PLATES

Follow these steps to prepare your nutrient agar plates. This 500g container can make approximately 900 to 1000 petri dishes.

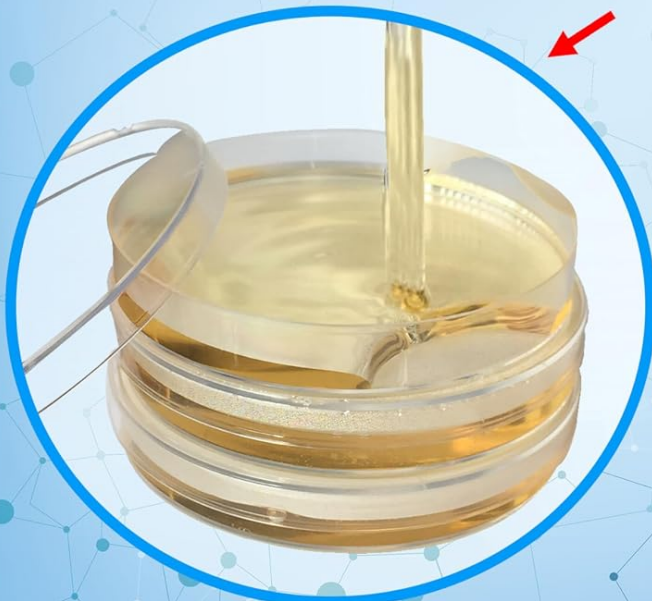
1. **Measure Ingredients:** For every 1 liter of distilled water, mix 23 grams of nutrient agar powder. Adjust quantities proportionally for smaller or larger batches. For example, for 250ml of water, use 5.75g of powder.
2. **Mix Thoroughly:** Combine the measured powder and distilled water in a heat-resistant container (e.g., a glass bottle or flask). Stir well until the agar powder is fully dissolved.
3. **Boil the Mixture:** Heat the mixture to boiling point, stirring continuously, until the agar is completely dissolved and the solution is clear. Be careful to prevent scorching.
4. **Sterilize (Recommended):** For optimal results and to prevent contamination, sterilize the mixture. This can be done in a pressure cooker or autoclave at 15 psi (121°C) for 30 minutes. Allow the mixture to cool to approximately 50-60°C before proceeding.
5. **Pour into Petri Dishes:** Carefully pour the cooled, sterilized agar mixture into sterile petri dishes. Pour enough to cover the bottom of the dish, typically 15-20ml for standard 90mm dishes.
6. **Solidify:** Allow the agar to solidify completely at room temperature. Once solidified, the plates are ready for use or storage.



Dissolve in boiling water



Sterilized in an autoclave or pressure cooker.



Pour to agar dishes

Image: Visual guide for preparing nutrient agar: dissolving, sterilizing, and pouring.

Your browser does not support the video tag. Please update your browser to view this content.

Video: Instructions on how to make your own agar plates from nutrient agar powder.

5. OPERATING: CONDUCTING EXPERIMENTS

Once your agar plates are prepared and solidified, you can begin your microbiology experiments. Here are general guidelines:

1. **Sample Collection:** Use a sterile cotton swab to collect samples from various surfaces (e.g., phone screen, doorknob, soil, air).
2. **Inoculation:** Gently rub the swab onto the surface of the agar in a zig-zag pattern. Avoid pressing too hard to prevent breaking the agar surface. Immediately replace the lid on the petri dish.
3. **Incubation:** Place the inoculated petri dishes upside down (to prevent condensation from dripping onto the agar) in a warm, dark place (e.g., an incubator or a closet) at room temperature (20-25°C).
4. **Observation:** Observe the plates daily for microbial growth. Results are typically visible within 24-48 hours, with full growth often appearing within 3-7 days.



Image: Demonstrating how to swab a surface and inoculate a petri dish.

MAKES 900 TO 1000 AGAR PETRI DISHES



Image: Stack of clear petri dishes, ready for use or showing initial growth.

The Experiment Ebook provides additional ideas and detailed instructions for various science projects you can perform with your nutrient agar.

6. MAINTENANCE AND STORAGE

- **Unused Powder:** Store the nutrient agar powder in its original sealed container in a cool, dry place away from direct sunlight. Ensure the lid is tightly closed to prevent moisture absorption.
- **Prepared Plates:** Store unused, prepared agar plates upside down in a refrigerator (2-8°C) to prevent condensation and extend shelf life. They can typically be stored for several weeks.
- **Used Plates:** As mentioned in the safety section, used plates containing microbial growth should be sterilized before disposal.

7. TROUBLESHOOTING

- **Agar Not Solidifying:** Ensure the correct powder-to-water ratio was used. The mixture must be boiled thoroughly until all powder is dissolved. Allow sufficient time for cooling and solidification.
- **No Growth on Plates:** Verify that the incubation temperature is appropriate (room temperature is usually sufficient). Ensure the sample collected contained microorganisms. If plates were sterilized, confirm the sterilization process was effective but not excessive to degrade nutrients.
- **Excessive Contamination:** This often indicates insufficient sterilization of the agar mixture or petri dishes, or improper aseptic technique during pouring or inoculation. Ensure all equipment is sterile and work in a clean environment.
- **Agar Clumping During Mixing:** Add powder slowly to water while stirring, or mix with cold water first before heating to prevent clumping.

8. SPECIFICATIONS

Feature	Detail
Product Name	Nutrient Agar Powder
Brand	ES EVVIVA SCIENCES
Model Number	EV38
Weight	500 Grams (17.637 Ounce)
Yield	Approx. 900-1000 Agar Petri Dishes per 500g
Material Feature	Vegan
UPC / GTIN	855925008422

9. SUPPORT AND RESOURCES

For further assistance, questions, or to access the Experiment Ebook, please refer to the contact information provided on your product label or visit the Evviva Sciences website.

- **Experiment Ebook:** An educational ebook with experiment ideas and instructions is available.
- **Expert Consultation:** Evviva Sciences offers expert support for interpreting experiment results, evaluating science fair projects, and setting up experiments.



**Contact Us
for Expert
Consultation**



Interpreting experiment results



Evaluating your science fair



Helping set up your experiment

Image: Expert consultation and support available from Evviva Sciences.

© 2024 ES EVVIVA SCIENCES. All rights reserved.

Statements regarding dietary supplements have not been evaluated by the FDA and are not intended to diagnose, treat, cure, or prevent any disease or health condition.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question

Open the live page

<https://manuals.plus/asin/B092HFRB79>

More documents and user manuals: <https://manuals.plus/>