

Fungi

Carolina™ CareSheet

Caution

This CareSheet only provides general information for handling Carolina™ fungal cultures. When you work with fungi, it is imperative that you use sterile techniques at all times. Failing to follow sterile techniques can contaminate cultures and work areas, and in some cases, cause health and safety risks. See our Carolina™ *Techniques for Studying Bacteria and Fungi* manual (item #154664) for descriptions of sterile techniques and standard practices for handling fungal cultures. This CareSheet does not cover our Mushroom Farm-in-a-Box (item #155883) and similar edible mushroom-growing kits.

Immediate care and handling

When your fungal cultures arrive, immediately open the shipping container and remove the cultures. We ship cultures in tubes, plates, and as MicroKwik Culture® freeze-dried cells. Visually inspect each culture. Ensure that tubes are intact with caps securely in place, plates have no cracks, lids are secured by tape, and plastic bags containing MicroKwik Culture® cells are securely closed with the enclosed tube and vial intact. You must seal any culture damaged during shipment—and anything it contaminated—in an autoclavable bag, then sterilize it by autoclaving or covering it with disinfectant. **Note:** *Never discard a damaged, unsterilized culture in the trash. Know and follow your school or district's guidelines for proper disposal. Contact Customer Service at 800.334.5551 for a replacement of your damaged culture. It will help to have your order number available when you call.*

Hold most cultures at room temperature, 20 to 22° C (68 to 73° F), and use within 3 to 5 days of receipt. Keep in mind that Carolina provides a variety of fungal cultures, and some have very specific care and handling needs that differ from these general guidelines.

Maintaining and culturing

Eventually your fungal culture will deplete the nutrients of the medium in or on which it is growing and will need subculturing. Before working with fungal cultures, wash your hands with soap and water, ensure that the work area is draft free, and wipe the work surface with 70% alcohol or similar disinfectant. **Note:** *Always check the culture for signs of contamination immediately prior to using.*

The transfer to fresh medium can be done with a standard bacteriological loop, but it is usually more convenient to subculture by cutting small blocks of agar covered with mycelium from the stock culture and transfer these blocks to fresh medium, placing the blocks upside down with the fungus in contact with the agar. This can be done with a half-spear point needle (item #627226) or scalpel (item #626164). After making the transfers, clean the work area with disinfectant and wash your hands again. Either autoclave the old stock cultures and glassware, or cover them with disinfectant overnight. For faster growth, you can incubate most cultures at 25 to 30° C (77 to 86° F).

FAQs

What agar should I use for my fungal cultures?

In Carolina's print and online catalogs, the product descriptions for our fungal cultures include the type of nutrient medium that we use for each culture. This information also appears on the label affixed to the culture. A wide range of fungi will grow on Potato Dextrose Agar (item

#786340). Sabouraud Dextrose Agar (item #786781) is another wide-spectrum fungal agar and is especially good for yeasts. Sometimes a fungus can be cultured on one agar but must be transferred to another agar for sexual reproduction to occur.

Can I pour my own plates if I don't have an autoclave?

See our Potato Dextrose Agar (item #776520) and other prepared media bottles. A bottle containing 125 mL of medium will pour 4 to 5 standard 100 × 15-mm plates. Watch our *How to Melt and Pour Agar Plates* video for a demonstration of the technique.

Should I order a tube or plate culture or a MicroKwik Culture®?

Tube cultures are best for stock. A tube culture is often transferred to a plate and incubated before lab use. Order a plate culture for convenience and immediate use. You can receive a plate culture and use it in a lab on the same day. A MicroKwik Culture® is best used for longer-term storage and to receive a culture of a pathogen.

What fungal culture do I need?

That depends on your intended use. Most microbiology lab manuals specify the culture or cultures to use. *Phycomyces blakesleeanus* is a model organism widely used for research. It is easy to grow and is available in + and – mating strains (items #156182 and #156183) for studying sexual reproduction in fungi. *Rhizopus stolonifer* is a popular fungus for introductory labs and is also available in + and – strains (items #156223 and #156224). *Pilobolus crystallinus* (item #156207) demonstrates phototropism. *Sordaria fimicola* (item #156291) is good for demonstrating ascospores in asci, and there are spore color mutations (items #156293 and #156294) for use in genetic studies. See our kits and sets for more details on these fungi and how to use them.

Problems?

We hope not, but if so contact us. We want you to have a good experience.

Orders and replacements: 1-800-334-5551, then select Customer Service.
Technical Support and Questions: caresheets@carolina.com



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