

We supply:

- Living materials
- Culture media
- Frozen materials
- Preserved materials
- Skeletons
- Microscopes
- Wall charts
- Stains and Indicators
- Seeds
- Books
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Bacterial and Fungi Cultures:

The bacterial cultures supplied will last approximately 2-3 weeks from the date received. Keep the lids on culture bottles sealed tightly when not in use. Cultures can be kept at room temperature, however putting them in the fridge will extend their life by a few weeks.

The bacterial cultures supplied are grown on either nutrient agar or in nutrient broth. The fungal cultures are grown on Malt Extract Agar. Aseptic technique should always be used when handling any bacterial and fungal cultures to prevent contamination.

Some basic tips to follow are:

- Wipe down benches with 70% alcohol or a suitable disinfectant before and after working with cultures
- Wash hands thoroughly before and after working with cultures
- Sterilise the inoculating loop with a Bunsen burner before and after inoculation
- Flame the necks of the culture bottles before and after inoculation
- Avoid leaving agar plates open for any longer than necessary for inoculation
- Avoid placing the lids of the culture bottles on the bench. Instead, hold the lid curled up inside your little finger.
- Work within close proximity of the Bunsen burner flame as this area will be sterile within a small radius
- Avoid talking while sub-culturing and work in a closed room to prevent airborne contamination
- Seal culture bottles tightly by securing their caps and ensure petri dishes have their lids in place when not in use
- Sterilise fresh agar by autoclaving, and allow to cool before inoculating
- Before disposal sterilise used agar plates and culture bottles by autoclaving, or soaking in 10% bleach solution.

Contamination can often be seen on solid agar plates as a few colonies with a different shape and colour than the majority of colonies on the plate.

Safety:

- Tie hair back when working with an open flame
- Avoid deliberately inhaling or smelling the culture
- Avoid eating or drinking in the laboratory
- Disinfect the work area before and after working with the cultures.

Sub-Culturing:

After inoculation from the sample supplied, you will need to incubate bacterial cultures at 33-37°C for 24 hours. Whilst incubating, leave the lids on culture bottles, but slightly loosen to allow oxygen to enter which is necessary for growth to occur. Do not incubate *Rhodospirillum rubrum* or any of the fungal cultures. These will grow at room temperature. *Rhodospirillum* is a slow growing micro-organism that requires a light source to grow, and takes 5-7 days after inoculation for the pink colour to develop.

Risk Groups:

One of the bacterial cultures in our range, *Bacillus cereus*, is in Risk Group 2 and is not recommended for use in school laboratories. All other cultures in our range are in Risk Group 1.

Bacterial cultures in Risk Group 1 are unlikely to cause human, plant or animal disease of importance. Extra care should be used when handling bacterial cultures in Risk Group 2 as these can cause non-serious human disease. The risk of infection is limited, especially if preventative laboratory techniques and safety steps, as listed above, are adopted.

Fungal spores may cause allergic reactions, so keep containers closed when not in use to prevent dispersal of the spores. Again, adopt the preventative laboratory techniques and safety steps, as listed above, to limit exposure.

Disposal :

At the end of a microbiology activity it is important that all equipment be sterilized prior to disposal. Sterilize at 121°C & a pressure of 15 psi for 20-30 minutes prior to disposal. Verify conditions with a sterile confirmation strip (E5.36) . For safe laboratory handling and disposal, refer to AS/NZS2243 Safety in Laboratory Standards.

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