

How to acclimatize Tissue Culture plants?



Congratulations on giving these tissue cultured plants a go! 🎉💚

Plantlets come in sterile flask gel media that is packed with nutrients to keep them growing for some time. After receiving the kit, either acclimatize your plantlets immediately, or wait a few weeks to let them grow while you prepare yourself for acclimatization. This is only possible if the plantlets are still intact in the media when you receive them. Should the flask arrive broken, leaky, or scrambled with gel due to courier mishandling, you must deflask soon. If you decide to deflask later, make sure you keep the flask under a light source with about 8-10hours of light per day, and place in an area that is relatively warm (20-30°C). Be mindful of the surface you put them on, e.g. stone benchtop turns very cold during night time in winter, so wooden areas will be better or a small piece of cardboard under will insulate the flask.

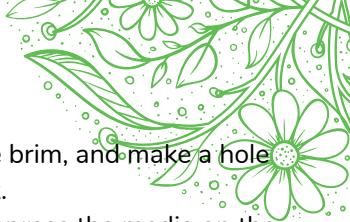
Acclimatization/acclimation is the adaptation of organisms to a new environment. When tissue culture plants are transferred from the flask to outside condition they are exposed to a lot of stresses like temperature, light, humidity, and even microbes living in the soil. So, they need step-wise acclimatization to successfully establish themselves in the natural environment.

Before doing the steps below, make sure that you handle everything aseptically. Wash your hands properly with soap and water. Wearing sterile gloves is advisable but is not necessary. All tools must be sterile before using. And make sure the working area is generally clean.

Steps in acclimating your tissue culture plantlets

1. Remove and clean the plantlets from flask

- Remove the clear tape seal and open the plastic tub/flask.
- Carefully remove each plantlet or cluster (tiny plantlets in one bunch) off the gel media. You can use your fingers or a long-armed thong. Leave the clusters intact as separating them at this stage will give them a very low chance of survival.
- Wash off the gel media on the plant surface under gentle running water.
- Remove any dried or dead leaves carefully.
- Extra care must be considered when handling the tiny roots so as not to damage the root hairs.
- Place the plantlets on a dry paper towel to remove excess water.



2. Transplant the plantlets

- Fill the seedling tray with the media provided up to the brim, and make a hole in the middle using your finger or a small wooden stick.
- Position the plantlet individually in the hole, lightly compress the media on the side to hold the plantlet in place, making sure that the roots are fully intact and covered with media.
- Fill the tray hole with media up to the brim.

3. Grow the potted plantlets in proper growing condition

- These plantlets will thrive well in temperatures ranging from 25 to 30°C, relative humidity of between 70% and 100%, and light intensity of 35 $\mu\text{mol}/\text{m}^2/\text{s}$ under a 10hour duration. Conversion is 2000lux for broad-spectrum grow light.
- If growing indoors, a practical solution is growing them in a take-away container or clear plastic box. Lids must be closed but make sure to provide a bit of air exchange between the outside and inside of the container.
- Place under a broad spectrum light (daylight) with a minimum of 10hours a day duration.
- During winter, heat mat might be necessary to heat up the root area of the plantlet. But make sure it doesn't go over 35°C otherwise it will cook the root area or dry up the media very quickly. Placing a cardboard on top of the heat mat would be a great option to reduce temperature.
- When the media looks dry from the surface, you will need to water them using a water spraygun.

For more information about acclimatization, please watch our video on YouTube @Flora Magnifica Australia

Please feel free to send us a message if you have any questions.

If you love this purchase, we would appreciate if you can give us a rating on our website or Google Reviews and tag us on our socials.



Thank you very much for your purchase!
we wish you all the best on your plant journey! ❤️



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