

# Blades Biological Ltd

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## PROTOZOAANDALGAE CULTURE INSTRUCTIONS

<u>Protozoa/Algae</u>	<u>Medium</u> [See over for recipe]	<u>Temperature</u>	<u>Subculture</u>
* Amoeba	Amoeba Medium	17°C - 19°C	every 3 weeks
Anabena	Soil Water Medium	room temperature	every 3 weeks
Chlamydomonas	Soil Water medium	room temperature	every 3 weeks
Colpidium	Wheat Medium	room temperature	every 3 weeks
Chilomonas	Wheat Medium	room temperature	every 3 weeks
Chlorella	Chlorella Medium	room temperature	every 3 weeks
Dunaliella	Salt water Medium	room temperature	every 3 weeks
Euglena	Euglena Medium	17°C - 19°C	every 3 weeks
Paramecium	Hay Infusion Medium	warm room	every 2 weeks
Rotifers	Wheat Medium	warm room	every 3 weeks
Scenedesmus	Alga Gro Medium	warm room	every 3 weeks
Spirogyra	Soil Water Medium	room temperature	every 3/4 weeks
Podophora	Live food - Colpidium	room temperature	every 2 weeks
Tetrahymena	Wheat Medium	room temperature	every 3 weeks
Volvox	Alga Gro Medium	room temperature	every 2 weeks

### IMPORTANT NOTES - on arrival of your cultures:

1. On arrival - loosen the jar lid
2. Aerate the culture gently using a clean pipette. Many of these organisms are very sensitive to detergents and chemicals so ensure that all equipment is biologically clean.
- \* 3. Certain organisms (eg amoeba) settle to the bottom of the jar and should be allowed to settle before removing gently with a pipette.
4. Ensure cultures are kept at an even temperature, away from direct sunlight.

## Salt Water Medium

Can be cultured in a solution of Marine Salt (Cat.no.ACS 006). Add no more than one drop of liquid manure (e.g.Baby Bio) per litre per week. Keep in a well lit position out of direct sunlight.

### **ALGAGRO CONCENTRATE**

A sterile enrichment for both fresh water and sea water, producing an almost universal alga medium. Each tube makes one litre of medium. **MED 173** 20ml

### **PROTOZOA AND ALGAE CULTURE MEDIUM RECIPES**

Cultures should be used for classwork within a few days of arrival or subcultured into a suitable medium as detailed over leaf.

**AMOEBIA MEDIUM** Take several dishes approximately 10cm in diameter and pour in Prescott & James solution (see below) to a depth of about 5cm. Add 3-4 uncooked rice grains and cover to exclude dust but not air. Stand at room temperature for 3-4 days before inoculating with 1-2ml of the amoeba culture which should include some Chilomonas to act as a food source. Leave undisturbed in a cool place (17-19°C) for approximately 3 weeks.

**PRESCOTT & JAMES SOLUTION** make up the following 3 solutions;

A] Calcium chloride (3.27g) + Potassium Chloride (1.62g) + Distilled water (100ml)

B] di-Potassium hydrogen orthophosphate (5.12g) + Distilled water (100ml)

C] Magnesium sulphate (2.8g) + Distilled water (100ml)

Final Solution: 0.1ml each of solutions A, B and C in 999.7 ml of distilled water.

**SOIL WATER MEDIUM** Place a pinch of CaCO<sub>3</sub> into the culture vessel and cover with about 1.5cm of good garden soil (the soil should be of about medium humus content and should not contain commercial fertilizer) Then fill the vessel three quarters full with distilled water. Cover and steam (not autoclave) for 2 hours on 2 consecutive days. Leave for a day to cool and settle before inoculation.

**WHEAT MEDIUM** Boil spring water and while hot pour 200cm<sup>3</sup> into each culture dish. Add 4 grains of previously boiled wheat. When cool (room temp) inoculate.

**CHLORELLA MEDIUM** To 1 litre of distilled water add; 1g Ammonium nitrate, 0.2g Magnesium Sulphate, 0.2g Potassium Chloride, and a trace of Ferric Chloride. Adjust to pH7. Inoculate with Chlorella and keep in a well lit area.

**HAY INFUSION MEDIUM** Fill a clean 1 litre beaker loosely with hay. Add distilled water to three quarters full. Steam for 30-45 minutes. Stand for 2 days. Adjust to pH7. Inoculate and cover.

**EUGLENA MEDIUM** Bring 1 litre of distilled water to the boil. Add 40 wheat grains and 35 rice grains, continue boiling for 5 minutes. Leave 2-3 days then inoculate, cover and leave in a well lit area but not in direct sunlight.