

## **Martian habitats in the classroom: testing *Artemia***

# **Getting and growing *Artemia***

### **Getting *Artemia***

Purchase *Artemia* cysts from a pet shop or an aquarium supplier.

### **Life in a drop of salt water: growing *Artemia* from cysts**

Brine shrimp cultures can be easily maintained in a classroom tank/aquaria by preparing salt water with artificial, non-iodised sea salt (30–35 g/dm<sup>3</sup>), filling 4-litre tanks with chlorine-free tap water adjusted to pH 7.5–8, and keeping them at 20–28°C. They may be maintained either under a controlled 14/10-hour light-dark cycle using artificial lighting, or simply with natural light, as continuous intense illumination is not required. A density of 250 eggs per 100 ml is generally used.

Maintaining adequate oxygenation through gentle aeration helps keep the animals active and healthy. When maintained for longer periods, the brine shrimp can be fed small amounts of microalgae (spirulina), finely ground fish food flakes, yeast or suitable commercial feeds. Partial water renewal and regular cleaning of the containers help prevent the build-up of waste and ensure good laboratory conditions.

### **Grow *Artemia* to adulthood**

Prepare a salt solution with the same salinity as the brine shrimp culture. Add powdered spirulina, finely ground fish food flakes or yeast until the solution appears slightly milky, then store it in a refrigerator. Shake the solution thoroughly before each use to resuspend the spirulina/yeast/fish food flakes. Feed the shrimp daily, taking care not to overfeed; the culture water should clear within 15 minutes after feeding.

When topping up the tank to compensate for evaporation, use fresh water rather than salt water, as salt does not evaporate and adding salt water would increase the salinity. With adequate aeration, 4 litres can house around 500 adult brine shrimp.