# Topic 1 – Practical 4

## *Observing feeding in* Paramecium

### Safety

• There are no specific safety hazards associated with this practical.

• Normal laboratory rules should be followed.

### Apparatus and materials

• yeast cells

• culture of *Paramecium* sp.or *Spirostomum teris*

• microscope

• depression slide

• coverslips

• petroleum jelly

### Introduction

*Paramecium* is a unicellular organism that lives in fresh water. It feeds by ingesting small items of food through its oral groove. Food is digested inside the animal’s body, inside a food vacuole. *Paramecium* is one of a group of organisms known as ciliates because they move in water using rows of tiny cilia, which beat to propel them along.

In this practical, you will observe *Paramecium* or other ciliates ingesting yeast cells. You should be able to see the yeast cells being ingested and then digested in a food vacuole, which moves through the cytoplasm as the process proceeds.

### Procedure

**1** Add equal volumes of *Paramecium* suspension and yeast cell mixture to the centre of a depression slide (this is known as a ‘wet mount’).

**2** Put a layer of petroleum jelly around the liquid and add a coverslip to prevent the organisms drying out.

**3** Observe *Paramecium* under an appropriate power of your microscope so that you can see the ingestion of the yeast cells into food vacuoles.

**4** Note the appearance of the vacuoles at intervals of 1, 5, 10, 20 and 30 minutes.

**5** On separate paper, make a careful drawing of *Paramecium* and label all the structures you can see.

### Questions and further work

**1** Identify the other structures you have observed in the body of the *Paramecium* and shownin your diagram. (See Subtopic **1.1**, *Introduction to cells*, in your student’s book for help with this.)

**2** Find out how *Paramecium* and other ciliates dispose of waste material that is left after digestion.