**Investigating the influence of laundry detergent on the growth of garden cress**

*In this experiment, the detergent solution represents wastewater, and cress plants represent the environment*

**Typical apparatus and materials [per pair of students]:** 7 dishes (e.g. crystallising dishes), 1 knife, 50 mL beaker, 100 mL graduated cylinder, 2 500 mL beakers, stirring rod, 20 mL graduated pipette, pipette filler, felt-tip pen, liquid detergent for coloured fabrics, 4 trays of garden cress (Figure 1a)

(a) (b)

Figure 1. Cultivation of cress

**Procedure:** Take the cress out of each tray, together with the mat in which it is growing. Use the knife to cut each mat in two. Place each half in its own dish. One half is left aside. Place the seven dishes in a row and mark them with the numbers 1 to 7. Prepare the solutions.\* Leave the cress in the dishes for a period of 5 to 7 days in normal light (Figure 1b). Add tap water as necessary to replace any water that evaporates, so that the volume of solution in each dish remains at its original level.

*\*Proposed concentration of liquid detergent in the series of dishes:* ***1.*** *Blank sample,* ***2.*** *0.01 mL/L,* ***3.*** *0.1 mL/L,* ***4.*** *1 mL/L,* ***5.*** *10 mL/L,* ***6.*** *100 mL/L,* ***7.*** *1000 mL/L*

**Disposal**: Pour the detergent solution down the sink. Put the cress dishes in the waste bin.