3 A microwave cooker uses electromagnetic waves of frequency 2450 MHz.
The microwaves warm the food in the cooker by causing water molecules in the food to oscillate with a large amplitude at the frequency of the microwaves.

(a) State the name given to this phenomenon.

..... [1]

(b) The effective microwave power of the cooker is 750 W.
The temperature of a mass of 280 g of water rises from 25 °C to 98 °C in a time of 2.0 minutes.

Calculate a value for the specific heat capacity of the water.

specific heat capacity = ... $J\,kg^{-1}\,K^{-1}$ [3]

(c) The value of the specific heat capacity determined from the data in **(b)** is greater than the accepted value.
A student gives as the reason for this difference: 'heat lost to the surroundings'.

Suggest, in more detail than that given by the student, a possible reason for the difference.

.....

..... [1]