

AE 405 LAB-1

DATA SHEET

GROUP MEMBERS (name, surname, signature)

- | | |
|----|----|
| 1. | 5. |
| 2. | 6. |
| 3. | 7. |
| 4. | 8. |

Procedure

1a) Measure the inner and outer diameter and the height of the plastic tube by using the Vernier Caliper.

The outer diameter of the plastic tube =

The inner diameter of the plastic tube =

The height diameter of the plastic tube =

Calculate the volume of the plastic tube

The volume of the plastic tube =

1b) Measure the mass of the plastic tube and calculate its density.

The mass of the plastic tube =

d (density) =

The density of the plastic tube =

2) Measure the thickness of the glass plate by using the micrometer.

The thickness of the glass plate =

3) Choose any two cubes from the set. Write the names (symbols) of the chosen cubes below. Measure the lengths and masses of each of them by using the micrometer and calculate their densities.

Cube-1:

The length of the cube-1 =

Calculate the volume of the cube-1=

The mass of the cube-1 =

The density of the cube-1=

Cube-2:

The length of the cube-2 =

Calculate the volume of the cube-2=

The mass of the cube-2 =

The density of the cube-2=

4) Use the spherometer to measure the radius of the curvature of the watch glass.

The name of the watch glass

The height of the watch glass (h) =

The distance between the feet (a) =

Calculate the radius of curvature (R) of the watch glass

5a) Measure the period of the pendulum by using the digital timer

The period of the pendulum (measured) =

5b) Measure the length of the pendulum and use it to calculate the period of the pendulum

The length of the pendulum thread =

The period of the pendulum (calculated) =

5c) Compare the measured and calculated periods of the pendulum and determine the percentage error.

$$E = \frac{|T_m - T_c|}{T_c} \times 100$$

where E is the percentage error, T_c is the calculated period and T_m is the measured period.