

Lab Exercise (Density 1) – Answers

- Objectives**
- a) To determine the density of pebbles. [Guided practice]
 - b) To determine the density of a wooden cork. [Formative]
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Part A: To determine the density of pebbles (Density of sinking object)

Materials

Electronic balance, pebbles, measuring cylinder

Procedure

- 1 Record m , the mass of a sample of pebbles using the electronic balance.
- 2 Pour some water into the measuring cylinder given. Record this volume as V_1 .
- 3 Add some pebbles into the water in the measuring cylinder. Record the new volume as V_2 .
- 4 Record your readings below.
- 5 Calculate the density of pebbles in g cm^{-3} .

Readings

Mass of pebbles = _____ (4 s.f. / 2 d.p.)
Volume, V_1 = _____ (1 d.p.)
Volume, V_2 = _____ (1 d.p.)

Calculations

$$\rho = m / (V_2 - V_1) \text{ (take note of s.f. / d.p.)}$$

Conclusion

The density of pebbles is _____ g cm^{-3} (2 s.f.)

Question

State what precautions must be taken in this experiment and explain why such precautions are necessary.

Pebbles should be lowered gently into the measuring cylinder to prevent water from splashing out of the measuring cylinder and affecting the accuracy of the results.

(Accept all other reasonable answers)
