

THEORY

When a body is placed in a liquid, it experiences an upward force called upthrust or buoyant force. This force is equal to the weight of the liquid displaced by the body. This is known as Archimedes' principle. The upthrust depends on the volume of the liquid displaced and the density of the liquid. If the density of the body is less than the density of the liquid, the body will float. If the density of the body is equal to the density of the liquid, the body will be fully submerged and remain in equilibrium. If the density of the body is greater than the density of the liquid, the body will sink.

APPARATUS

- 1. Spring balance
- 2. Beaker
- 3. Water
- 4. Immersible solid
- 5. Immersible liquid
- 6. Thread
- 7. Weights

PROCEDURE

1. Weigh the solid in air.

EXPERIMENT



Step	Weight in air (W ₁)	Weight in water (W ₂)	Upthrust (U)
1. Solid in air
2. Solid in water

From the above table, it is observed that the upthrust is equal to the weight of the liquid displaced by the solid. This verifies Archimedes' principle.