

Aim :

To determine the speed and direction of water current.

Material s required:

Plastic bottle

Fishing Line of 5 meters

White sand

Stop Watch

Compass

Procedure:

To carry out this experiment, select a particular spot in a lagoon that has water up to chest level. Take an empty plastic bottle and fill it with sand or water so that it can stand vertically with its neck above the water. Close the mouth of the bottle and tie one end of the fishing line to its neck. Tie the other end to the finger so that, when the entire 5 meters are drifted away, it pulls the finger.

Now carefully, without disturbing the water, place the bottle and start the stop watch. We can see the bottle drifting away. With the help of compass determine the direction in which the bottle is moving and record it in the tabular column. When the entire 5 meters fishing line is completely drifted away and when the finger is pulled, stop the stop watch and record the time in the tabular column. It is the time taken for 5 meters line to completely get drifted away.

Repeat this procedure for three times to validate the result. Tabulate the values.

From the values, calculate the speed of the water current with the help of formula

$$\text{Speed} = \frac{\text{Length of the line}}{\text{Time taken to get drifted away}}$$

Tabular Column:

Exp.No.	Time(24Hrs)	Direction(°)	Length of the line(m)	Time taken(s)	Speed(m/s)
1			5		
2			5		
3			5		
Average					