

Practical 4 – Topic 4

Measurement of index of refraction

Criteria assessed

- DCP
- CE

Materials needed

- 12 V power supply
- Light box (12 V, 20 W), containing three tight fitting covers
- Optical disk (large protractor)
- Semicircular piece of glass
- Semicircular plastic container filled with water

What to do

Rays of light are directed onto the flat surface of the semicircular piece of glass. The angles of incidence and refraction are measured using the large optical disc (protractor). The semicircular piece of glass will be replaced in the second part of this experiment by the container of water. The index of refraction will be obtained using $n = \frac{\sin \hat{i}}{\sin \hat{r}}$ and a suitable graph.

