

## Physics Lab Equipments & Experimental Setups

**ME 870 - To measure the wavelength of light (sodium vapour lamp) source using Michelson's interferometer.**

**Setup comprises of:**

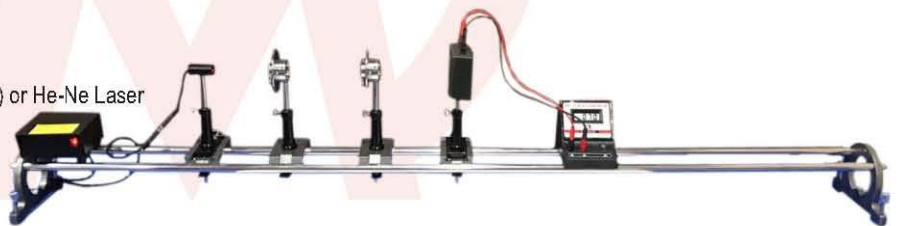
- Light Source : 35 Watt Sodium vapour lamp housed in powder coated Steel cabinet with Transformer & Stand
- Michelson's interferometer
  - 1) Pin hole in a black aluminium disc.
  - 2) Glass diffuser disc.
  - 3) Beam splitter G1 (Optical Glass) 50/ 50 size 50mm x 45mm, thickness 8mm, surface l/ 10 flat, parallelism better than 10 arc seconds coating Aluminium with silicon mono oxide protective coating.
  - 4) Mirrors (2 Nos.) - Optical Glass fully reflecting, l/ 10 flat, Aluminium coated with silicon mono-oxide overcoat.
  - 5) Compensating plate like beam splitter but without coating.
  - 6) Drum Screw - One rotation produces a movement of 1mm. Threaded length 200mm,,Dia 17mm.
  - 7) Fine movement - Least count 10-4mm.
  - 8) Telescope - It is a short focal length telescope with rack and pinion arrangement to be mounted on a rod fitted in the instrument.



**ME 872 - To verify the Law of Malus's for plane polarized light with the help of photovoltaic cell.**

**Setup Consist of :**

- Optical bench : 1Meters (Full Shaper)
- Monochromatic Light Source : Diode Laser (Power 5mW) or He-Ne Laser
- Polarizer & Analyzer
- Photo voltaic cell
- Digital Ammeter : 1000 $\mu$ A
- Patch Cord : 4mm Patch Cord (2 Nos)



**ME 873 - Determine the Brewster Angle using Diode Laser (Complete Setup)**

**Objective :**

- To determine the polarizing angle for the glass prism surface and to determine the refractive index of the material of the prism using Brewster's law  $\tan \theta = \mu$



**Setup comprises of:**

- Specially designed Spectrometer : 6 Inch, Least count - 30 Sec.
- Monochromatic Light Source : He-Ne Laser (Power 2mW) or Diode Laser
- Polaroid
- Prism : Crown Glass (base 3.2cm)
- Laser beam analyzer (Photovoltaic cell)
- Digital Ammeter : 1000 $\mu$ A DC
- Patch Cord : 4mm (2 Nos.)

**ME 873S - To determine the polarizing angle for the glass prism surface and to determine the refractive index of the material of the prism using Brewster's law  $\tan \theta = \mu$ .**

**Setup consist of :**

- Spectrometer : 6 Inch, Least count - 30 Sec.
- Light Source : 35 Watt Sodium vapour lamp housed in powder coated Steel cabinet with Transformer & Stand
- Polaroid attachment for the objective of the telescope
- Prism : Crown Glass (base 3.2cm)