

5.1.05-01/05 Planck's "quantum of action" from the photoelectric effect (line separation by diffraction grating)



Set-up of experiment P2510501 with amplifier

What you can learn about ...

- External photoelectric effect
- Work function
- Adsorption
- Photon energy

Principle:

A photocell is illuminated with monochromatic light of different wavelengths. Planck's quantum of action, or Planck's constant h , is determined from the photoelectric voltages measured.

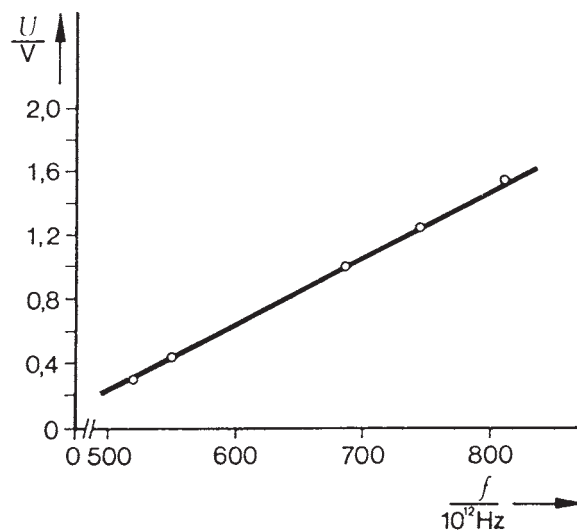
What you need:

Experiment P2510505 with electrometer

Experiment P2510501 with amplifier

Photocell, for h detection, with housing	06778.00	1	1
Diffraction grating, 600 lines/mm	08546.00	1	1
Colour filter, 580 nm	08415.00	1	1
Colour filter, 525 nm	08414.00	1	1
Diaphragm holder, attachable	11604.09	2	2
Slit, adjustable	08049.00	1	1
Lens holder	08012.00	2	2
Lens, mounted, $f = +100$ mm	08021.01	1	1
Mercury vapour high pressure lamp, 80 W	08147.00	1	1
Screened cable, BNC, $l = 30$ cm	07542.10	1	1
Connecting cable, 4 mm plug, 32 A, red, $l = 25$ cm	07360.01	1	1
Connecting cable, 4 mm plug, 32 A, blue, $l = 25$ cm	07360.04	1	1
Lamp socket E 27 on stem	06176.00	1	1
Power supply for spectral lamps	13662.97	1	1
Universal measuring amplifier	13626.93	1	
Digital multimeter 2010	07128.00	1	1
Optical profile bench, $l = 600$ mm	08283.00	2	2
Base for optical profile bench, adjustable	08284.00	3	3
Turning knuckle for optical profile bench	08285.00	1	1
Slide mount for optical profil bench, $h = 80$ mm	08286.02	4	4
Electrometer Amplifier	13621.00	1	
Adapter BNC socket/4 mm plug pair	07542.27	1	
Power supply 12V AC/500 mA	11074.93	1	

Complete Equipment Set, Manual on CD-ROM included
Planck's "quantum of action" from the photoelectric effect (line separation by defraction grating) P25105 01/05



Voltage of the photo-cell as a function of the frequency of the irradiated light.