EXpT

SISTEMAS DE ENSINO E PESQUISA PARA LABORATORIO

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# EXpT exclusive distributor of PHYWE in Portugal presents some of the Nobel Prize experiments

## X - ray

## Specific charge

### XR 4.0 expert unit, 35 kV

Item no.: 09057-99

The PHYWE X-ray unit offers you a precise and safe demonstration of the penetration of matter by X-rays, a ground-breaking concept that Röntgen discovered in 1895 and for which he was awarded the Nobel Prize in 1901.

Learning objectives:

- Structural analysis
- Characteristic radiation
- Bragg reflection
- Radiology
- Dosimetry
- Computed tomography


### Specific charge of the electron - e/m

Item no.: P2510200

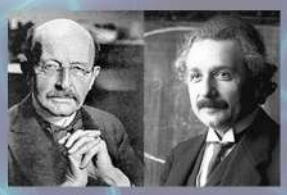
With the PHYWE e/m experimental setup, you can experimentally determine the specific electron charge based on Thomson's discovery in 1897, which brought him the Nobel Prize in 1906.

Learning objectives:

- Cathode rays
- Lorentz force
- Electron in crossed fields
- Electron mass
- Electron charge

## Michelson interferometer

## Planck's quantum of action



### Michelson interferometer - High Resolution

P2220911

The Michelson interferometer, an innovation from the 1880s, enables high-precision measurements of the smallest changes in path length.

Applications include, for example, the Michelson-Morley experiment and gravitational wave detection.

Michelson was honoured with the Nobel Prize for this in 1907.

Learning objectives:

- Interference
- Wavelength
- Diffraction index
- Speed of light
- Phase
- Virtual light source

### Planck's "quantum of action" and photoelectric effect

Item no.: P2510402

The PHYWE experimental set-up for Planck's radiation formula enables the demonstration of Planck's quantum theory, which was introduced in 1900 and for which he was awarded the Nobel Prize in 1918.

Albert Einstein received the Nobel Prize in 1921 for his explanation of the photoelectric effect, which is closely linked to Planck's quantum hypothesis.

Learning objectives:

- External photoelectric effect
- Work function
- Absorption
- Photon energy
- Anode / Cathode