

Physics

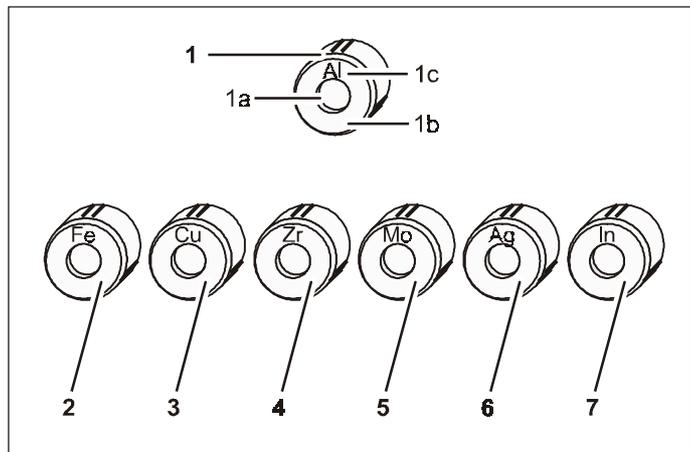
Chemistry · Biology

Technology



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06/05-W97-Set



Instruction sheet 554 832

Set of absorber foils (554 832)

- 1 **Al-absorber**
foil (1a), foil holder (1b), symbol of element (1c)
- 2 **Fe-absorber**
- 3 **Cu-absorber**
- 4 **Zr-absorber**
- 5 **Mo-absorber**
- 6 **Ag-absorber**
- 7 **In-absorber**

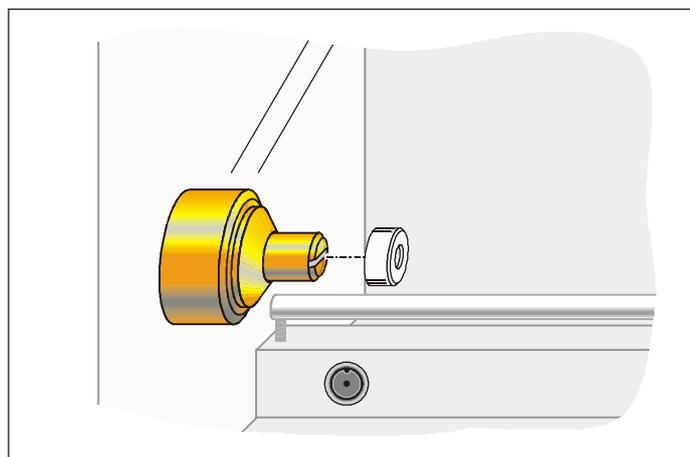
1 Description

The set of absorber foils contains materials with different atomic numbers Z ($23 \leq Z \leq 49$) and is used for experiments on Moseley's law and on the λ^3 and Z^4 dependency of the coefficient of attenuation.

The absorbers can be attached to either the collimator of the X-ray apparatus (554 81) or to the sensor seat of the goniometer (554 83). When attached to the collimator, the absorbers filter the polychromatic X-rays. When the absorbers are mounted on the sensor seat it is possible to determine the wavelength-dependent attenuation of the monochromatic X-rays which have been produced through Bragg reflection. The transmission curves (the ratio of the spectra with absorber to the reference spectrum without absorber) can be used to find the absorption edges and determine the functional attenuation curve outside the absorption edges.

4 Mounting

Mounting at collimator of the X-ray apparatus:



2 Scope of supply

1 each Al-absorber, Fe-absorber, Cu-absorber, Zr-absorber, Mo-absorber, Ag-absorber, In-absorber

3 Technical data

Frame:	24 mm dia. × 11 mm
Foils	10 mm dia.
Al-foil	$d = 0.5$ mm
Fe-foil:	$d = 0.5$ mm
Cu-foil:	$d = 0.07$ mm
Zr-foil:	$d = 0.05$ mm
Mo-foil:	$d = 0.1$ mm
Ag-foil:	$d = 0.05$ mm
In-foil:	$d = 0.3$ mm

Mounting at sensor seat of the goniometer:

