Copper refining (C5.1.2.3)

C5.1.2
EXTRACTION OF METALS FROM ORE

C5.1.2.3
Copper refining

Cat. No.	Description	C5.1.2.3
664 4071	Electrochemistry demonstration unit, CPS	1
666 425	Panel frame C50, two-level, for CPS	1
666 472	Table for electrochemistry, CPS	1
664 401	Electrochemistry accessories set	1
664 130	Beaker, Boro 3.3, 250 ml, squat	1
664 131	Beaker Boro 3.3, 400 ml, squat	1
665 754	Measuring cylinder 100 ml, with plastic base	1
ADA HCB123	Compact Balance 120 g : 0.001 g	1
666 714	Cartridge burner, DIN type	1
602 783	Glass rod, 200 mm, diam. 6 mm	1
665 9531	Dropping pipette 150 mm x 7 mm Ø	1
665 9541	Rubber bulb	1
666 584	Filtration stand for two funnels	1
665 005	Funnel, Boro 3.3, 100 mm diam.	1
609 082	Folded filter 125mmØ Typ: 595	1
672 9600	Copper(II) sulfate-5-hydrate, 100 g	1
674 7850	Sulfuric acid, 95-98 %, 250 ml	1
673 8400	Sodium hydroxide solution, diluted, aprox. 2 M, 500 ml	1
675 3400	Water, pure, 1 l	1

Raw copper contains traces of other elements. These can be removed via electrolysis. To do so, raw copper is electrolysed in a copper sulfate solution. The raw copper is used as the anode. Here, the ignoble elements and copper will dissolve. At the cathode (also made from copper), pure copper is deposited.

In this experiment, the copper refinement is conducted using a brass electrode (copper, „contaminated“ by sinc).