

**Volta's battery, column type****5124**

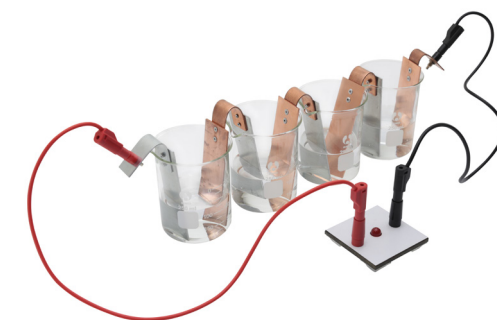
It is made of copper and zinc parts, separated by felt disks soaked in an acid solution. It is supplied with a bottle of acid solution.



5124

**Volta's battery, cups type****5167**

It is composed of 4 voltmeters in series. It is supplied with copper and zinc electrodes, acid solution, cables and an LED assembled on a panel.



5167

**Apparatus for the electrical conductivity of liquids****5113**

Comprised of 4 bulbs in parallel. The electrolytic liquids must be poured into the four glasses, in which the electrodes are immersed. With this simple device, the electrolyte solutions can be recognised and the variation of conductivity as a function of the concentration can be studied.



5113

**Human battery****5287**

Placing your hand on two of the four metal plates (zinc, lead, aluminium and copper), you create a potential difference between the plates because of the electrical conduction properties of the human body. This potential difference can be measured through the use of a millimetric voltmeter (not included)

Trying all possible combinations between metals, it is possible to guess the existence of the electrochemical series.

Plates dimensions: 15x23 cm.

Board dimensions: 23x65 cm.



5287

## Electrolytic cell

5415

### Topics

- Electrical conductivity in liquids
- Volta's battery
- Electricity accumulator
- Electroplating

### Equipment supplied

- |                              |  |
|------------------------------|--|
| 1 Base for electrolytic cell | 1 Brass electrode                      |
| 2 Supports for electrolytes  | 1 Sulphuric acid bottle, 10% solution  |
| 2 Coal electrodes            | 1 Bottle of copper sulphate's solution |
| 2 Copper electrodes          | 1 Glass beaker                         |
| 2 Zinc electrodes            | 3 Electrical leads                     |
| 2 Lead electrodes            |  |

### Equipment required not supplied

- |                  |                      |
|------------------|----------------------|
| 1 Battery holder | 1 Digital multimeter |
| 4 1,5V Battery   |                      |

### Replacements for electrolytic cell

All electrodes kit for cod. 5415	5415.1
Brass electrodes (couple)	5043.1
Lead electrodes (couple)	5043.2
Copper and zinc electrodes (couple)	5043.3

5415.1 - 5043.1 - 5043.2 - 5043.3



5415

## Hofmann's voltmeters

With graduated tubes and their metal stands. Height: 70 cm. Power supply unit (suggested code 4991) and connecting wires requested.

### With carbon electrodes 5102

### With platinum electrodes 5103



### Replacements for Hofmann's voltmeter

Glass part only 5102.1



Carbon electrodes (couple) 5165



Platinum electrodes (couple) 5166



5102 - 5103 - 5102.1 - 5165 - 5166