

# NERNST'S EQUATION

## Mod. C-AV-39/EV

### DESCRIPTION

Nernst's equation expressed as the electrical potential of an electrode in contact with a solution of ions depends on the activity of these ions. The equation can be experimentally verified by using an electrochemical cell formed by an inert electrode coupled with a convenient reference electrode. The potential of the indicator electrode and then the electromotive force of the cell are monitored when the ionic composition of the electrolyte solution is varied.

An electrode of silver chloride is used as the reference electrode by measuring the potential of a platinum electrode in contact with solutions containing different concentrations of iron ions (II) and iron (III).

### TRAINING PROGRAM

- Electrode potentials and their dependence on concentration
- Redox electrodes
- Electrochemical cells

### COMPONENTS

- Digital pH meter
- Reference electrode to silver chloride
- Platinum electrode
- Magnetic stirrer
- Burettes
- Beakers
- Flasks
- Pipettes
- Potassium hexacyanoferrate (II)
- Potassium hexacyanoferrate (III)
- Distilled water



### REQUIRED (NOT INCLUDED)

- EVLAB DATALOGGER mod. EVS-EXP/EV including SOFTWARE EVLAB WORKSPACE mod. SW-C-AV-39/EV for a total control of interactive experiments
- Temperature sensor mod. EVS-15/EV
- pH sensor mod. EVS-BIO-01/EV
- PERSONAL COMPUTER



### SUPPLIED WITH

THEORETICAL - EXPERIMENTAL HANDBOOK

