8.1 Introduction

This chapter contains definitions and recommendations for terminology and the usage of symbols in electroanalytical chemistry. The fundamental terms can be found in section 1.3.10 and in the IUPAC Green and Gold Books.

The analytical methods classified in this chapter include those in which *electroanalytical chemistry* is the body of techniques for operation of electrochemical process or phenomenon is the main point of the measuring principle: electrochemical cells leading to qualitative and quantitative responses. These responses can be calibrated in terms of desired concentrations. Electroanalytical chemistry includes cell materials and cell and system design to optimize determination of various parameters (e.g., transport and interfacial kinetic parameters) needed for concentration determinations. These are the fields of

- **voltammetry**, \( i \neq 0; \ E = f(t) \)
- **potentiometry**, \( i = 0 \);
- **amperometry**, \( i \neq 0; \ E \) = const.);
- **impedance or conductance** measurements using a small amplitude a.c. applied potential difference and
- other, **combined** (like spectroelectrochemical) **methods**.

Since in the electroanalytical methods either the operation of the cells or the electrodes themselves have the main roles for controlling current responses, there are included two separate subsections on electrochemical cells and electrodes. The principles and techniques of pH measurements are not included here but in Chapter 3, (see sections 3.4 and 3.5).