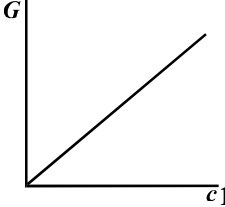
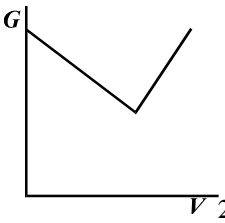
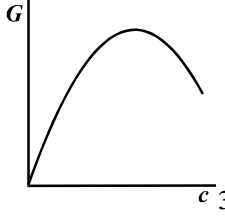
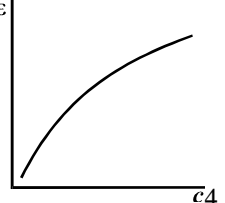
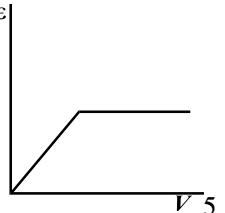


8.5.4 Impedance or conductance and related measurements (Techniques in which Neither the Electrical Double Layer Nor Any Electrode Reaction Need Be Considered)

Recommended Name of Technique	Excitation Signal	Independent Variable	Measured Response	Typical Response Curve	Remarks
Conductometry	Alternating voltage; frequency $f < \text{ca. } 0.1 \text{ MHz}$	Concentration c	Conductance $G = f(c)$		A measure of the ability of a solution to carry an electric current. For a conductor of a geometrical area of cross-section A (SI base units m^2) and length l (SI base units m), $1/R = G = k(A/l)$ where R is the resistance (SI base units ohms, Ω), L the conductance (siemens, $\text{S} = \Omega^{-1}$) and k the conductivity (S m^{-1}).
Conductometric titration	As for conductometry	Volume V (or otherwise measured amount) of a reagent	Conductance $G = f(V)$		
High frequency conductometry	Alternating voltage; frequency $f > \text{ca. } 0.1 \text{ MHz}$	Concentration c	Conductance $G = f(c)$, susceptance $B = f(c)$, admittance $Y = f(c)$		The recommended term is inexact when B or Y is measured, but names like "susceptometry" cannot be encouraged.
High frequency conductometric titration	As for high frequency conductometry	Volume V (or otherwise measured amount) of a reagent			

8.5.4 Impedance or conductance and related measurements (Techniques in which Neither the Electrical Double Layer Nor Any Electrode Reaction Need Be Considered) (Continued)

Recommended Name of Technique	Excitation Signal	Independent Variable	Measured Response	Typical Response Curve	Remarks
Dielectrometry	As for high frequency conductometry	Concentration c	Relative permittivity $\varepsilon = f(c)$	 <p>The graph shows a coordinate system with the vertical axis labeled ε and the horizontal axis labeled c. A curve starts at the origin and increases with a decreasing slope, characteristic of a concave-down function.</p>	The name "dielectrometry" is found in the literature, but is not recommended.
Dielectrometric titration	As for high frequency conductometry	Volume V (or otherwise measured amount) of a reagent	Relative permittivity $\varepsilon = f(V)$	 <p>The graph shows a coordinate system with the vertical axis labeled ε and the horizontal axis labeled V. The curve starts at the origin, increases linearly to a certain point, and then continues as a horizontal line, representing a constant value of relative permittivity after a certain volume of reagent is added.</p>	

