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mass-transfer-controlled electrolyte rate constant

In controlled-potential coulometry and related techniques, the empirically evaluated constant of proportionality defined by the equation

$$s_{\mathrm{B}} = -\frac{1}{c_{\mathrm{B}}}\frac{\mathrm{d}c_{\mathrm{B}}}{\mathrm{d}t}$$

where c_{B} is the bulk concentration of the substance B, and $\frac{\mathrm{d}c_{\mathrm{B}}}{\mathrm{d}t}$ is the rate of change of that concentration, resulting from the consumption of B by reduction or oxidation at the working electrode.

Source:
PAC, 1985, *57*, 1491 *(Recommended terms, symbols, and definitions for electroanalytical chemistry (Recommendations 1985))* on page 1501

