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mass distribution ratio, k_{MEKC}

in micellar electrokinetic chromatography

Defined as:

$$k_{\mathrm{MEKC}} = \frac{n_{\mathrm{mc}}}{n_{\mathrm{aq}}} = K \cdot \frac{V_{\mathrm{mc}}}{V_{\mathrm{aq}}}$$

where n_{mc} and n_{aq} are the chemical amounts of the analyte in the micellar and aqueous phases, respectively, K is the distribution constant and V_{mc} and V_{aq} are the corresponding volumes of the phases.

Notes:

1. In the case of an electrically neutral analyte, k_{MEKC} can be calculated directly from the migration times:

$$k_{\mathrm{MEKC}} = \frac{t_{\mathrm{m}} - t_{\mathrm{eo}}}{t_{\mathrm{eo}}} \left(1 - \frac{t_{\mathrm{m}}}{t_{\mathrm{mc}}}\right)$$

2. k_{MEKC} should not be confused with the retention factor (in column chromatography) k. However, k_{MEKC} is analogous to the mass distribution ratio (in chromatography).

Source:

PAC, 2004, *76*, 443 *(Terminology for analytical capillary electromigration techniques (IUPAC Recommendations 2003))* on page 449

