potentiometric selectivity coefficient

A coefficient which defines the ability of an ion-selective electrode to distinguish a particular ion from others. The selectivity coefficient, $K_{A,B}^{pot}$, is evaluated by means of the emf response of the ion-selective electrode in mixed solutions of the primary ion, A, and interfering ion, B (fixed interference method) or less desirable, in separate solutions of A and B (separate solution method). The activities of the primary ion, A, and the interfering ion, B, at which $K_{A,B}^{pot}$ is determined should always be specified, as the value of $K_{A,B}^{pot}$ is defined by the modified Nikolsky–Eisenman equation. The smaller the value of $K_{A,B}^{pot}$ the greater the electrode's preference for the principal ion, A. Comment: The terms selectivity constant and selectivity factor are frequently used instead of selectivity coefficient. However, in order to standardize the terminology associated with ion-selective electrodes, use of the term selectivity coefficient is recommended, as is the fixed interference method for its evaluation. This selectivity coefficient is not identical to the similar term used in separation science.

Source:
PAC, 1994, *66*, 2527 *(Recommendations for nomenclature of ionselective electrodes (IUPAC Recommendations 1994))* on page 2532