Swain–Scott equation

The linear free-energy relation of the form:

$$\log_{10}\left(\frac{k}{k_0}\right) = s\,n$$

applied to the variation of reactivity of a given electrophilic substrate towards a series of nucleophilic reagents. n is characteristic of the reagent (i.e. a measure of its nucleophilicity) and s is characteristic of the substrate (i.e. a measure of its sensitivity to the nucleophilicity of the reagent). A scale of n values is based on the rate coefficients k for the reaction of methyl bromide with nucleophiles in water at 25 °C, s being defined as 1.00 for these reactions and n being defined as 0.00 for the hydrolysis of methyl bromide. (Other scales have been devised.)

Source:
PAC, 1994, *66*, 1077 *(Glossary of terms used in physical organic chemistry (IUPAC Recommendations 1994))* on page 1169