

### Swain–Scott equation

The *linear free-energy relation* of the form:

$$\lg (k/k_0) = sn$$

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.)

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