relative adsorption

If $\Gamma_i^\sigma$ and $\Gamma_1^\sigma$ are the Gibbs surface concentrations of components $i$ and 1, respectively, with reference to the same, but arbitrarily chosen, Gibbs surface, then the relative adsorption of component $i$ with respect to component 1, is defined as

$$\Gamma_i^{(1)} = \Gamma_i^\sigma - \Gamma_1^\sigma \frac{c_i^\alpha - c_i^\beta}{c_1^\alpha - c_1^\beta}$$

and is invariant to the location of the Gibbs surface. Alternatively, $\Gamma_i^{(1)}$ may be regarded as the Gibbs surface concentration of $i$ when the Gibbs surface is chosen so that $\Gamma_i^\sigma$ is zero, i.e. the Gibbs surface is chosen so that the reference system contains the same amount of component 1 as the real system. Hence $\Gamma_1^{(1)} \equiv 0$.

*Source:*

PAC, 1972, 31, 577 (Manual of Symbols and Terminology for Physicochemical Quantities and Units, Appendix II: Definitions, Terminology and Symbols in Colloid and Surface Chemistry) on page 591