

Free energies of transfer of anions from water to cationic micelles from ionic exchange measurements

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Ionic exchanges for several anions in hexadecyltrimethylammonium (CTA) have been measured by ultrafiltration and by the shift in the concentration of ferric thiocyanate complex by CTA addition. The results are compared with those previously reported using an absorbance method. The agreement between the three methods is good, and they allow one to calculate the free energies of transfer from water to CTA micelles for the anions studied. The values are discussed in terms of several properties of the anions. It is concluded that both entropic and enthalpic effects are responsible for the specificity of binding of the anions to CTA micelles. © 1981 American Chemical Society.