the Gouy–Chapman theory. The effect due to the taking into account of different planes of closest approach for the anion and the cation is not sufficient to account for this difference and one must envisage the competitive influence of the ion-solvent interactions which is all the more important that one is dealing with mixed solutions of choline and potassium chlorides. As in the case of tetralkylammonium salts one notes an effect due to the cation on the adsorption of the anion. The adsorption of the chlorides exactly neutralizes the electrode charge even for fairly high concentrations. The adsorption of the bromide and iodide vary with the concentration in a different manner for each ion. One can interpret these results taking into account both the relative hydrophobicity of the cation and the disymmetry introduced in the choline molecule as a result of the OH group, as well as, once again, the competitive effect in the influence on the solvent between the cations and anions, an effect which varies according to the nature of the anion.

This study reveals in the case of organic cations the inadequacy of the usual differentiation between diffuse and compact layers which neglects the intrinsic solvent effect. It also shows, in this respect and with regards of all the results obtained, the fundamental importance of the solute–solvent interactions on the adsorbability.

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An Approach to Non-Specific Interactions of the Hydrophobe Type Based on the Study of the Interfacial Behaviour of Normal Aliphatic Alcohols

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The adsorption of normal aliphatic alcohols at the mercury aqueous solution interface has been studied by measuring the differential capacity at the potential of minimum capacity (*i.e.* maximum d'adsorption) as a function of the length of the aliphatic chain, the concentration of the alcohol in solution and the nature of the electrolyte [1].

C^{-1} is observed to vary linearly with the number of carbon atoms n_C in the aliphatic chain and the slope varies with the nature of the anion of the base electrolyte (F^-, Cl^-, Br^- or I^-) but not with the cation (K^+ or Na^+). The limiting value for $n_C = 0$ shows that the adsorbed layer includes at least a layer of water molecules which can be attributed to the hydration of the polar heads. These results, together with those given by Pleskov *et al.* [2], obtained by photoemission studies, suggest that the alcohol molecules are probably not adsorbed in their extended conformation.

One also notes that C is independent of the alcohol concentration in solution once saturation is reached and what ever the base electrolyte. At the interface the situation is therefore the same as in solution with the appearance at this point of a new phase and this serves to illustrate the close correlation which exists between the physico-chemical properties of the interfacial phase as compared to those of the solution.

This leads to the interesting conclusion that although the adsorption of alcohols on mercury have long been studied [3] this approach sheds a new light on the interaction between adsorbed surface active substances and the other solution constituents.

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Adsorption Isotherms of Neutral Molecules for 'Regular Interfacial Solutions'

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A new determination of the adsorption isotherm based on recent developments in interfacial thermodynamics [1, 2] has been suggested, underlining