

## **ELECTROKINETIC'S ASPECTS OF PHASES INTERACTIONS IN O/W FOOD EMULSIONS**

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This work deals with the electrokinetic's aspects of interactions between the dispersed oil globules of O/W emulsions in the presence of protein and sugars in the aqueous phase.

One way in which the surface charge at an interface can be probed is through the measurement of electrokinetic's phenomena that can be induced at an interface. In comparing different electrokinetic's methods, the results are commonly reduced to a single parameter, the zeta potential. The effect of proteins on the zeta potential of the oil globules appears in relation to the different magnitudes of the isoelectric points of the protein immobilized. The surface activity of protein molecules results in the formation of an adsorbed layer on the oil globules, so the adsorbed protein molecules play an important role in the surface potential of the globules.

In the presence of sugars water molecules around the dispersed oil globules tend to increase in viscosity. The zeta potential decrease with increasing sugars concentration in aqueous phase. This phenomenon may suggest that the presence of sugar causes the slipping plane to migrate over the surface of each oil globule. The changes in zeta potential caused by presence of sugars do not affect the attraction between the oil globules. This phenomenon may be brought about by the hydration repulsion between the oil globules in aqueous media.