## Study of aggregates in dispersions of iron oxides by light scattering and by TEM

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The dispersions of hematite and of hematite-akageneite composite stabilized by sodium alkyl sulfates (concentration range 0.1 to 8 mM) were studied by Malvern Zetasizer ( $\zeta$  potential, particle size) and by TEM. At sufficiently high surfactant concentration the  $\zeta$  potential was in the range -50 to -60 mV and almost pH-independent. In spite of this high absolute value of  $\zeta$  potential the particles were aggregated. Surprisingly, different specimens of reagent-grade SDS gave different particle size (pH) curves. This result suggests substantial role of impurities contained in reagent grade surfactants in aggregation of iron oxides.

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