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# Mechanisms of Formation of Colored Clay-Organic Complexes. A Review

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**Abstract:** The interactions of clay minerals with organic compounds which give rise to the formation of colored complexes, are discussed. The color reactions of clays can be ascribed to a charge transfer between the mineral and the adsorbed species. The active sites on the clay are aluminums exposed at crystal edges and/or transition metal cations in the higher valency state at planar surfaces both of which can act as electron acceptors. The pH of the system, the nature of the solvent and that of the exchangeable cation, influence the rate of color development and the final intensity and quality of the color produced. Steric factors also play a part in reactions involving bulky organics. Some practical applications based on color reactions of clays with electron-donating organic substances are described.

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