Scan Electron Micrographs of Kaolins Collected from Diverse Origins— III. Influence of Parent Material on Flint Clays and Flint-Like Clays

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Abstract: The nature of the parent material from which flint clay or flint-like clay is derived may modify the texture of the clay as observed by SEM. Flint clays occurring in Pennsylvanian-age swamp basins into which were transported residues weathered from sedimentary country rock exhibit a texture of interlocked kaolin pockets and sheaves. On the other hand, flint clay or flint-like clay derived by weathering of volcanic ash exhibits a texture resembling, on a micro-scale, the scalloped, "oak-leaf" pattern of montmorillonite. The interpretation is that an expanding clay having a transitional role between the ash and the kaolinite is the donor source of the micro-scalloped pattern inherited by kaolinite. X-ray powder diffractograms of the clays support the interpretation.

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