
A Purple-Colored 1M Mica Clay from Silverton, Colorado

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Abstract: A purple-colored clay of 1M mica polymorph in association with lead-zinc ore was collected from an abandoned mine dump near Silverton, Colorado. Electron micrographs show that the crystallites of the clay are less than 2μ in size and have poorly developed hexagonal outlines. Differential thermal and i.r. absorption analyses indicate similarity with those of muscovite. The structural formula of the 1M mica polymorph is $(K_{1.45} Na_{0.02})(Al_{3.75} Mg_{0.19})(Si_{6.90} Al_{1.10})O_{20}(OH)_4$. The purple color may be related to trace amounts of manganese in the clay.

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