
Antigorite—Its Occurrence as a Clay Mineral

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Abstract: A white clay from the Jatoba talc mine, Castro, Paraná, Brazil, is shown by chemical analysis, X-ray and electron diffraction, and by thermal analysis to be essentially pure antigorite in the strict sense of the term. Single crystal electron diffraction patterns give various values for the long a parameter, with $43 \cdot 5 \text{ \AA}$ perhaps the most commonly occurring, $b = 9 \cdot 25 \text{ \AA}$, $d(001) = 7 \cdot 25 \text{ \AA}$. X-ray powder diffraction gives $d(001) = 7 \cdot 26 \text{ \AA}$ and $b = 9 \cdot 23 \text{ \AA}$. Electron micrographs show irregular platy and lath-like crystals of about $0 \cdot 5 - 2 \mu$ size with large development of (001) planes and with b in the direction of elongation. Other crystals are observed with very unusual forms, some having holes through them. They show mainly $0kl$ diffraction patterns and lie with the basal (001) planes normal to the stage of the instrument. The chemical analysis agrees closely with the ideal serpentine composition and the differential thermal analysis curve is consistent with antigorite.

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