
Alteration of Ilmenite in the Manavalakurichi Deposit, India

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Abstract: Magnetic fractionation, chemical, and structural analyses prove that alteration of ilmenite from Manavalakurichi deposit extends only up to the formation of pseudorutile with traces of rutile. The data indicate that ferrous to ferric iron transformation, ferric iron oxide formation, and iron removal contribute to the alteration sequence. The first two highly magnetic fractions are not unaltered ilmenite. A reduction in ilmenite unit cell volume indicates the ferrous-ferric conversion occurred during alteration.

Key Words: Alteration • Ilmenite • Pseudorutile • Unit cell volume

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