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This joint work with B. Ulrich was motivated by quite surprising results on the integral closures of ideals proved by Itoh and Huneke independently.

Theorem 1. *Let A be a Noetherian ring and let I be a complete intersection ideal of A . Then*

$$\overline{I^{n+1}} \cap I^n = \overline{I} I^n, \quad \text{for all } n \geq 1.$$

A particular question we are interested in is whether the assertion in Theorem 1 holds for more general ideals than ideals generated by regular sequences. While we are trying to answer this question, we are able to show that the completeness of any ideals of height at least 2 is compatible with a specialization of generic elements. We use this compatibility to give a direct proof of Theorem 1 under slightly modified assumptions. (Received September 25, 2005)