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Neil Epstein* (nepstei2@gmu.edu) and **Jay Shapiro**. *The Ohm-Rush content function II: Noetherian rings and valuation domains.*

Following on our previous work on the Ohm-Rush content function (a concept that mimics the notion of content for polynomial extensions, but which is defined for any faithfully flat ring extension), we further analyze the properties of weak content and semicontent algebras. We show for example that given a Noetherian base ring, or an INC extension, the notions of weak content and semicontent algebras coincide. When the base ring is Artinian, even more can be said. We analyze the semicontent property for various extensions $R \subset S$, e.g. for $R = K[x_1, \dots, x_n]$ and $S = L[x_1, x_2, \dots, x_n]$, where $K \subset L$ are fields, or for R and S valuation rings, or when R is Prüfer. Connections are drawn to valuation theory, dimension theory, and the recently solved Stillman conjecture. (Received January 14, 2017)