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Title:	Discriminant as a product of local discriminants
Authors:	Jakhar, A. (/jspui/browse?type=author&value=Jakhar%2C+A.) Khanduja, S.K. (/jspui/browse?type=author&value=Khanduja%2C+S.K.) Jhorar, B. (/jspui/browse?type=author&value=Jhorar%2C+B.) Sangwan, Neeraj (/jspui/browse?type=author&value=Sangwan%2C++Neeraj)
Keywords:	Discriminants valued fields henselization
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Abstract:	Let $R$ be a discrete valuation ring with maximal ideal $\mathfrak{p}$ and $S$ be the integral closure of $R$ in a finite separable extension $L$ of $K$ . For a maximal ideal $\mathfrak{P}$ of $S$ , let $R^*_\mathfrak{p}, \hat{S}_\mathfrak{P}$ denote respectively the valuation rings of the completions of $K, L$ with respect to $\mathfrak{p}, \mathfrak{P}$ . The discriminant satisfies a basic equality which says that $\text{disc}(S/R)R^*_\mathfrak{p} = \prod \mathfrak{P} \mid \mathfrak{p} \text{disc}(\hat{S}_\mathfrak{P}/R^*_\mathfrak{p})$ . In this paper, we extend the above equality on replacing $R$ by the valuation ring of a Krull valuation of arbitrary rank and completion by henselization. In the course of proof, we prove a generalization of the well-known weak Approximation Theorem which is of independent interest as well.
URI:	<a href="https://www.worldscientific.com/doi/10.1142/S0219498817501985">https://www.worldscientific.com/doi/10.1142/S0219498817501985</a> ( <a href="https://www.worldscientific.com/doi/10.1142/S0219498817501985">https://www.worldscientific.com/doi/10.1142/S0219498817501985</a> ) <a href="http://hdl.handle.net/123456789/1804">http://hdl.handle.net/123456789/1804</a> ( <a href="http://hdl.handle.net/123456789/1804">http://hdl.handle.net/123456789/1804</a> )
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