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酸不溶物对碳酸盐岩风化壳发育程度的影响 [点此下载全文](#)

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摘要:

通过对贵州岩溶区(包括湘西)不同地层系统碳酸盐岩发育的红色风化壳、以及结合本区和处于同一气候对比研究, 结果表明: (1) 碳酸盐岩红色风化壳的发育程度明显受基岩酸不溶物成分的控制, 酸不溶物的风化程度一般也越强。由于不同地层系统碳酸盐岩的酸不溶物组成不同, 在此基础上发育的红色风化壳的风化强度自对于母岩的进一步风化潜力或空间, 随着基岩酸不溶物风化成熟度的增大而降低, 从而更容易达到风化平衡; (2) 土界面, 伴随碳酸盐的充分淋失、酸不溶物的地球化学指标发生了突变。因此, 碳酸盐的溶解不但未阻滞和延缓其快速风化。(4) 在达到高岭石化甚至弱红土化阶段的酸不溶物基础上, 发育的风化壳比结晶岩类风化壳具有高的风化强度。因此, 笼统地把碳酸盐岩风化壳看作是弱于玄武岩及花岗岩等结晶岩类风化壳发育程度的弱风化

关键词: [酸不溶物](#) [碳酸盐岩风化壳](#) [风化强度](#) [不同母岩类型](#) [贵州岩溶区](#)

Impact of Acid-Insoluble Residua of Carbonate Rocks on Developing Intensities of The Crusts [Download Fulltext](#)

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Abstract:

Through studying weathering characteristics of red weathering crusts developed on carbonate systems in Guizhou karst region (including western Hunan Province), and comparing with red weathering crusts of other styles of bed rocks in native and ambient areas under the same climatic zone, we draw conclusions: (1) Weathering intensities of red weathering crusts of carbonate rocks are markedly dominated by the composition of acid-insoluble residua, and the more high weathering maturity of acid-insoluble residue is, in general, the higher the degree of red weathering crust is. Owing to different stratum systems having different compositions, weathering intensities of red weathering crusts based on them are certainly distinct; (2) Further weathering crust falls along with increasing in weathering maturity of acid-insoluble residue of carbonate rocks, consequently it reach weathering equilibrium more easily; (3) At the sharply transitional interface, geochemical indices of acid-insoluble residua bring abrupt change. Therefore, the dissolution of carbonate rocks retard and stave the decomposition of silicate, but also promotes its fast weathering; (4) Based on carbonate rocks up to the degree of kaolinization and even weak laterization, weathering crusts have beginning points than that of crystalline rocks, and show higher weathering intensities. Consequently, weathering crusts of carbonate rocks as a weak weathering style relative to those of basalt and granite.

Keywords: [acid-insoluble residua](#) [weathering crust of carbonate rock](#) [weathering intensity](#) [different weathering styles](#) [Guizhou karst region](#)