

## 利用圆盘入渗仪推求含碎石土壤饱和和水力传导度(英)

### Estimating saturated hydraulic conductivity of soil containing rock fragments with disc infiltrometer

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中文摘要:

在模拟土柱中, 利用圆盘入渗仪对碎石对土壤饱和和水力传导度的影响进行了分析。结果表明: 含碎石土壤饱和和水力传导度可以通过对不同负压下土壤稳定入渗速率进行非线性回归获得。含碎石土壤饱和和水力传导度与去除碎石后的土壤饱和和水力传导度及碎石形状指数密切相关。试验中含碎石土壤的饱和和水力传导度随碎石含量的增加而呈指数降低趋势。

英文摘要:

Simulation experiment was conducted in soil columns and the effects of rock fragments on soil saturated hydraulic conductivity by disc infiltrometer were analyzed. Results indicate that saturated hydraulic conductivity of soil containing rock fragments can be calculated through nonlinearly regressing steady infiltration rates at different negative water heads. Saturated hydraulic conductivity of soil containing rock fragments is closely correlated to the hydraulic conductivity of soil without rock fragments and the shape coefficient of the rock fragments. And the hydraulic conductivity of soil containing rock fragments decreases exponentially with the increase of rock fragments in the experiment.

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