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土壤与肥料科学

# 土壤磷流失风险的水溶性磷测定方法初探*

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摘要 土壤中磷素的积累会增加磷的流失风险，影响水环境质量。对采自滇池流域不同土壤类型上的3个混合土样土壤水溶性磷（WP）的测定方法作了一个探讨，对相应原状土样进行了室内模拟降雨径流试验。结果表明：土样在浸提时间为60min时，不同水土比土壤WP测定值的标准差最小；土样在水土比为1∶60时，不同浸提时间土壤WP测定值的标准差最小，所得结果较稳定，精密度较高；土壤WP与径流总磷（TP）和可溶性总磷（TDP）之间的相关性均在水土比1∶20，浸提时间90min，水土比1∶60，浸提时间60min和90min时较好；综合来看，在水土比1∶60，浸提时间60min条件下测得的WP能更好地用来评价土壤中磷流失的环境风险。

关键词 土壤磷； 流失风险； 水溶性磷； 测定方法

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# The Discuss on Water Soluble Phosphorus Determined of Soil Phosphorus Loss Risk

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**Abstract**

Accumulation of phosphorus in soils increases the potential of phosphorus runoff from the soils and thus affects water environmental quality. In this study 3 mixed soil samples from three different soil types in Dianchi lake were collected for discussing the water soluble phosphorus （WP） determined, 3 original soil samples for indoor rainfall simulation tests. The results showed that the deviation of soil WP in the case of different ratio of water and soil is least when the extracted time is 60min, and than the determined value is more steady and accurate; the deviation of soil WP in the case of different extracted time is least when the ratio of water and soil is 1∶60, and than the determined value is more steady and accurate; The correlation coefficients between soil WP and runoff TP and TDP are all better in the case of the ratio of water and soil is 1∶20, the extracted time is 90 minute, the ratio of water and soil is 1∶60, the extracted time is 60 and 90min. Generally speaking, the determined WP in the case of the ratio of water and soil is 1∶60, the extracted time is 60min, which can.

**Key words** soil phosphorus； loss risk； WP； determined methods

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