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论文

松嫩平原土壤有机质含量高光谱反演研究

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摘要:

采集松嫩平原典型类型土壤样本252个.室内条件下测定了风干后土样的光谱.对原始光谱数据作预处理后,分别运用多元线性逐步回归法和偏最小二乘法建立土壤有机质含量高光谱预测模型.结果表明,采用2种方法建立的模型均可满足有机质含量速测要求,但偏最小二乘法得到的模型更具稳健性.

关键词: 高光谱 有机质 多元线性逐步回归 偏最小二乘回归

Retrieval of soil organic matter content from hyper-spectra in Songnen Plain

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Abstract:

A total of 252 soil samples were collected in Songnen Plain. Reflectance was measured in a controlled laboratory environment. After pre-processing of the primitive spectra, hyper-spectral models for predicting soil organic matter content were built up by using the methods of Stepwise Multiple Linear Regression (SMLR) and Partial Least Squares Regression(PLSR). The results show that the models using the two methods are capable of predicting SOM content and the model using PLSR is more robust.

Keywords: hyper-spectral soil organic matter stepwise multiple linear regression partial least squares regression

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