



## **Practical hints on using the visible and near infrared diffusive reflectance spectroscopy in soil sciences and land resources assessment**

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The paper introduces practical hints on using the visible (VIS) and near infrared (NIR) diffusive reflectance spectroscopy in soil sciences and land resources management. Furthermore, it summarizes the results of potential implementation of the VIS-NIR spectroscopy under non-mobile laboratory, non-mobile in situ and on-the-go measurement conditions. The non-mobile applications include measurement of soil physical and chemical properties, soil texture and soil type classification, effect of spectrophotometer type on the accuracy of soil moisture content measurement, effect of spectrophotometer wavelength range on the accuracy of selected soil chemical parameters. Preliminary results of using an on-the-go measurement system for quantifying selected soil properties were also presented. A comparison between the accuracy of local and global calibration models in prediction of soil phosphorous was also presented. The paper suggests the high potential of VIS-NIR spectroscopy for successful assessment of soil sciences and land resources.

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