PLS "FTIR - crude fiber" model for forages from hill permanent grassland

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In this study was obtain a FTIR calibration model to predict the crude fiber content of forages harvested in period October 2007 - August 2009 from hill permanent grassland (Grădinari, Caraş-Severin District). The forages samples were purchased in different vegetation stages, considering also that experimental field was organized in ten experimental trials fertilized organic, mineral, and organo-mineral. The floristic composition of forages was determined gravimetrically. From Poaceae were present Festuca rupicola and Calamagrostis epigejos. Fabaceae family was represented by Trifolium repens and Lathyrus pratensis. From other botanical family: Rosa canina, Filipendula vulgaris, Galium verum and Inula britanica. To obtain the calibration model "FTIR-CF" was used the results for this parameter by chemical method and the reflectance values from FTIR spectra, only for the 4 selected ranges. Partial last square (PLS) regression was used to obtain the calibration model, implemented in Panorama program (version 3, LabCognition, 2009). The statistical parameters R2=0.8167 and RMSEC=2.5315, and the differences between chemical results and predicted values suggest that it is promising to develop FTIR models to predict the crude fiber contents of forages from grassland.