

POLYAMIDE CHROMATOGRAPHY AS A PURIFICATION AID IN THE FUNCTIONAL GROUP ANALYSIS OF SOIL HUMIC FRACTIONS

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After the precipitation of humic acid from an alkaline extract of humic matter, the supernatant fulvic acid (FA) fraction contains significant amounts of non-humic material in addition to the true FA's which are phenolic condensation products (Schnitzer 1978). These two fractions could be separated on Polyclar (PVP) which is a specific adsorbent for phenolics (Loomis, 1975). The fraction retained on the Polyclar column (FA-p) is the true FA, while the effluent (FA-np) would be the non-humic fraction.

Analysis of the functional groups of humic fractions requires the obtaining of low-ash preparations of these fractions. Developmental work done in this direction gave a new scheme of fractionation, which made it possible to obtain high yields of FA-p with extremely low ash contents. Using this scheme the relative contribution of the different humic fractions to the acidity groups of humic matter was examined. The contribution of FA-np was very small while that of FA-p was appreciably large.

References:

1. Loomis, W. D. (1975) Overcoming problems of phenolics and quinones in the isolation of plant enzymes and organelles. *Methods of Enzymol.* **31**, 528-544.
2. Schnitzer, M. (1978) Some observations on the chemistry of humic substances. *Agrochimica* **22**, 216-225.