Estimation of Cd, Zn, and Cu Buffering Capacities in Soils using Metal Fractionation. (S11-doolittle134357-Poster)

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Abstract:

Buffering capacity of heavy metals in soils is an important factor in regulating plant availability of the metals. It has been estimated using sorption capacity, desorption capacity, or buffer power of the metals. The relationship between the solid phases of metals (quantity factor) and the solution phases of metals (intensity factor) is termed the metal buffer power. This study will present the correlation among various Cd, Zn, and Cu fractions determined by modified methods of Tassier's and BCR's metal fractionation procedures; water extractable, different salt extractables, acid extractable, reducible, and oxidizable metal fractions, and DTPA-extractable metals as the intensity or quantity factors. The potential use of these metal fractions as quantity or intensity factors to determine Cd, Zn, and Cu buffer power in soils will also be discussed.

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