Colloidal Phosphorus in Runoff from Western US Soils. (S11-turner140223-Oral)

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Abstract:

We used ultrafiltration to determine concentrations of colloidal phosphorus (defined as phosphorus associated with particles between 1 nm and 1 um in diameter) in water extracts and artificially generated runoff from a range of mainly calcareous, low organic matter, cultivated soils of the western US. Colloidal phosphorus represented up to 50% of the molybdate-reactive phosphorus in soil waters, suggesting that simple determination of dissolved inorganic P by membrane filtration and molybdate-reaction considerably overestimates free orthophosphate.

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