Chemical and Spectroscopic Properties of Humic Substances from Soils and Streams of a Northeastern Forest Ecosystem. (S07-ussiri173955-Oral)

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Abstract:

We conducted experiments to investigate properties of organic matter isolated from soils, soil solution, and stream water from Hubbard Brook Experimental Forest, using chemical methods and carbon-13 NMR spectroscopy. Fulvic acids isolated from the stream water and had lower acidic functional groups than fulvic acids isolated from soils. Solid-state CP/MAS carbon-13 NMR analysis revealed that alkyl and O-alkyl C were the dominant fractions of C in three settings. OM isolated from stream water and Oa soils had similar spectroscopic characteristics, suggesting that, the stream DOC mainly originates from the forest floor.

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