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New Experimental Approaches to Measuring Plant-Extracted Waters

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Traditional techniques for measuring isotopic water have been restricted to laboratory use. New optical technology in the form of CRDS is robust and portable and allows measurements of water isotopologues in both liquid and vapor phases to be performed in the field. Results from a recent field measurement will be presented including measurements of vapor from evapotranspiration, irrigation water, and plant water extracted using a new method developed by the IAEA. In addition data obtained from a range of plant water extracts will be presented including quantitative evaluation for organic contamination, and the resulting impact on the isotopic measurement will be discussed.