

Materials List for:

Integrated Field Lysimetry and Porewater Sampling for Evaluation of Chemical Mobility in Soils and Established Vegetation

Audrey R. Matteson^{*1}, Denis J. Mahoney^{*2}, Travis W. Gannon², Matthew L. Polizzotto¹

¹Department of Soil Science, North Carolina State University

²Department of Crop Science, North Carolina State University

*These authors contributed equally

Correspondence to: Matthew L. Polizzotto at matt_polizzotto@ncsu.edu

URL: <https://www.jove.com/video/51862>

DOI: [doi:10.3791/51862](https://doi.org/10.3791/51862)

Materials

Name	Company	Catalog Number	Comments
Prenart Super Quartz Samplers (PFTE/Quartz)	Prenart Equipment ApS	N/A	Any samplers for trace metal analysis can be used (e.g. SoilMoisture Equipment Corp.)
Prenart installation kit	Prenart Equipment ApS	N/A	Contains all items necessary to install porewater samplers
2 L collecting bottles	Prenart Equipment ApS		Bottles can also be purchased from Fisher Scientific (02-923-2) or other laboratory supply companies, but fittings will need to be adjusted. Bottles can be covered with dark material if light sensitive
Portable vacuum pump	Prenart Equipment ApS	N/A	Vacuporter from Decagon Devices or other field battery-operated or hand vacuum pump may be used
1 oz HDPE Nalgene bottles	Fisher Scientific	03-313-4A	Sample bottle type will depend on analyte of interest and may be glass
Concentrated nitric acid	Fisher Scientific	A509-P212	Oxidizing and corrosive-other acids may be needed for preservation and should be used with caution
25 mm 0.2 µm nylon syringe filters	VWR	28145-487	Other filter types and pore sizes may be used, dependent on the analyte of interest and analytical instrumentation
60 ml Luer-Lok syringes	Fisher Scientific	13-689-8	Other sizes may be used depending on sample volume collected
Portable pH meter	VWR	248481-A01	Other pH meters can be used following calibration
Graduated cylinder	any	N/A	
Field lysimeters (metal, plastic, etc.)	N/A	N/A	Often these are constructed based on the researchers specifications
Inverted post driver tractor	N/A	N/A	Any tractor can be used to install the lysimeters
Handheld boom sprayer	N/A	N/A	To apply the rate needed for application
Polyethylene bags	Johnson & Johnson	N/A	Other brands may be used for soil storage
Reciprocating saw	Black & Decker	N/A	Any reciprocating saw can be used with a metal cutting attachment