

Materials List for

Monitoring Pedogenic Inorganic Carbon Accumulation Due to Weathering of Amended Silicate Minerals in Agricultural Soils.

Reza Khalidy^{*1}, Fatima Haque^{*1}, Yi Wai Chiang¹, Rafael M. Santos¹

¹School of Engineering, University of Guelph

* These authors contributed equally

Corresponding Author

Rafael M. Santos
santosr@uoguelph.ca

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jove.com/video/61996

Materials

Name	Company	Catalog Number	Comments
Analytical scale	Sartorius	Quintix 224-S1	Four decimals.
Calcimeter	Eijkelkamp	Model 08.53	To determine the wt% CaCO ₃ -equivalent in the sample.
Drying cabinet/muffle furnace	Thermo Scientific	F48055-60	50°C or 103 ± 2°C.
HCl	Fisher Scientific	A144S-500	Reagent grade (36.5%-38.0%).
HNO ₃	Fisher Scientific	T003090500	Trace metal analysis grade (69.0%-70.0%)
Inductively Coupled Plasma Mass Spectrometer (ICP-MS)	PerkinElmer	NexION	To determine the concentration of Ca in the microwave-digested soil.
Microwave digester	PerkinElmer	Titan	To digest soils in concentrated HNO ₃ .
pH meter	Oakton	700	Calibrated with standard solutions before each set of measurements; temperature corrected to 25 °C.
Scanning Electron Microscope - Energy Dispersive Spectroscopy (SEM-EDS)	Oxford	X-Max20 SSD	To determine the morphology of soil particulates.
Sieve shaker	Retsch	AS-200	For soil fractionation.
Soil auger sampler	Eijkelkamp	01-16	Depths down to 700 cm.
Soil Dakota probe sampler	JMC	PN139	Depths down to 100 cm.
Soil probe sampler	JMC	PN031	Depths down to 30 cm.
Soil moisture meter	Extech	MO750	Measure moisture content up to 50%
Wavelength Dispersive X-ray Fluorescence spectroscopy (WDXRF)	Malvern Panalytical	Zetium	To characterize elemental composition of soil.
X-ray Diffraction analyzer (XRD)	Panalytical	Empyrean	To characterize mineralogical properties of soil.