

Materials List for:

## In Situ Characterization of Boehmite Particles in Water Using Liquid SEM

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### Materials

Name	Company	Catalog Number	Comments
Carbon Coater	Cressington	208 Carbon	It is accompanied with thickness monitor MTM-10.
SEM	FEI	Quanta 3D FEG	It provides highly resolved scanning electron microscopy and elemental analysis.
System for Analysis at the Liquid Vacuum Interface (SALVI)	Pacific Northwest National Laboratory	N/A	SALVI is a unique, vacuum compatible microfluidic cell that enables the characterization of the liquid sample using vacuu- based scientific instrument.
PEEK Union	Valco	ZU1TPK	The polyether ether ketone union is used for connecting the inlet and outlet of SALVI
Syringe	BD	309659	1 mL
Pipette	Thermo Fisher Scientific	21-377-821	Range: 100 to 1,000 mL
Pipette Tip 1	Neptune	2112.96.BS	1,000 µL
Pipette Tip 2	Rainin	17001865	20 µL
Syringe Pump	Harvard Apparatus	70-2213	It is used to inject the liquid sample into the SALVI device.
pH meter	Fisher Scientific/accumet	13-636-AP72	It is used for measuring the pH of AIOOH in DI water.
Barnstead Ultrapure Water System, UV/UF	Thermo Scientific Barnstead	Nanopure diamond D11931	It is used for producing DI water.
Centrifuge tubes	Fisher scientific/Falcon	15-527-90	15 mL
Bransonic ultrasonic cleaner	Sigma-Aldrich	2510	It is used to ultrasonicate the AIOOH liquid sample.
Balance	Mettler Toledo	11106015	XS64
AIOOH	Pacific Northwest National Laboratory	N/A	It is synthesized by scientists at Pacific Northwest National Laboratory.
xT microscope Control	FEI	Quanta 3D FEG	Default microscope control software of SEM Quanta 3D FEG
EDAX Genesis software	EDAX	N/A	The software is used for collecting the EDX elemental information of the samples.
Teflon tubing	SUPELCO	58697-U	It is used for introducing the sample into the microchannel and holding adequate volume of liquid.