



Oct 23, 2019

## Microplastic SEM Sample Prep

Forked from a private protocol

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2 Works for me dx.doi.org/10.17504/protocols.io.uy8exzw

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### Sample Dehydration

- 1 Fill a petri dish with enough PBS to submerge your microplastic sample. Rinse the plastic in the PBS bath to remove loosely associated debris.
- 2 Next, create similar baths of ethanol or HMDS, as indicated below.  
Submerge each piece of plastic in the bath, let incubate in solution for ⌚ 00:15:00  
Washes:
  1. 25% ETOH
  2. 50% ETOH
  3. 70% ETOH
  4. 95% ETOH
  5. 100% ETOH
  6. 100% ETOH
  7. 2 ETOH: 1 HMDS
  8. 1 ETOH: 1 HMDS
  9. 1 HMDS

### Drying

- 3 Air-dry the dehydrated samples overnight in desiccator underneath a fume hood. ⌚ 12:00:00 overnight

### Affix

- 4 Affix plastic to double-side carbon tape on aluminum stud.  
Draw a strap of carbon paint from stud base to top of plastic. Dry overnight in desiccator. ⌚ 12:00:00 overnight

### Microscopy

- 5 The next day, sputter-coat plastic sample with heavy metal.

6 Image sample under scanning electron microscope as soon as possible following sputter-coating.



Samples keep for a maximum of 2 weeks after prep.



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