

Checklist for ICP-MS: Getting quality data using liquids

- ✓ Make your reservation early.
 - A week in advance is recommended to have the best chance at being accommodated. Any less than that and you may not get the proper assistance.
- ✓ Email the Lab Manager to confirm your reservation.
 - The Lab Manager needs to be available to change the cones or provide other assistance in order to ensure the instrument is operating at its peak.
- ✓ Perform tests while the Lab Manager is in the office.
 - This is also why emailing is important. The Lab Manager works weekdays from 8am – 5pm, but may be on vacation so confirm early. This gives you the best chance at troubleshooting assistance that leads to usable data.
- ✓ Read the SOPs and check the Canvas course.
 - If you have any questions, read the SOPs. There are hyperlinks inside the SOPs that help you navigate and find what you need. Check the concise operating procedures. The Canvas course has helpful videos and tutorials to assist you in setup and running. Ask the Lab Manager if you can't figure something out.
- ✓ Perform a rinse while the instrument warms up.
 - After the plasma is lit, rinse the system with 2 % or 5 % nitric acid to clean out the lines and clean the cones off. Do this for at least an hour before checking your tune.
- ✓ Check your tune before running samples.
 - Validate the tune settings with the 10 ppb tuning solution before you run samples to ensure the instrument falls within acceptable target value ranges. See the SOPs and Canvas site for more help on this.
- ✓ Always monitor your data and solution levels.
 - Nothing will waste a session faster than running out of rinse solution or ISTD solution or not monitoring that your data does not look good. If you notice early on, we can usually figure out the problem and get the samples running quickly.
- ✓ Ask for help.
 - The Lab Manager is usually available to help. Check the sign outside the office in ES 130 for current location. If you can't find them, ask Juliet Barnes in ES 131 and she can usually locate them for you. To dial on campus extensions first dial 360-650-xxxx where the xxxx is the extension number.
- ✓ Validate your data as you go.
 - This is a little different from monitoring data. This means having spiked samples or blank verifications or some other sort of sample to run in between unknown samples that helps you verify the data. See EPA method 200.8 if you have any questions or need ideas. Your research advisor should be able to help with this as well.

Lab Manager contact information:

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