

Standard Operating Procedures – Microbiology Lab

Dec. 2003

I. Port Call

- Crossover with off-going crew. Read all tech reports and crossover notes. Ask if/when/how counterpart will be available while traveling or at home in case questions arise.
- Assist as needed with on/off loading cores, freight, etc. Dispose of any trash and any waste generated by sample preparation - in port, if possible.
- Unpack items from the shipment for microbiology and make sure that the orders are correct. Contact the LO/ALO immediately if discrepancies are found.
- Make sure supplies are adequate and equipment/instruments are operational and notify Lab Officer of any problems.

II. Site Preparation

- Discuss any sampling issues/sample handling with Curator, Staff Scientist, and the microbiologists themselves.

III. On Site Activities

Shipboard Science Support

- Assist with core lab duties. **Note:** the core lab is your primary duty and the microbiology lab is secondary unless arrangements are made with the Lab Officer to meet special objectives.
- Assist in sample collection on the catwalk or with sample preparation if asked. Microbiologists have very specific routines for their research and tend to work independently. Usually, only assistance with supplies and equipment maintenance is needed.
- Provide a place for microbiologists to request supplies and fill requests promptly.
- Monitor equipment/instruments and clean the lab periodically throughout the leg.

IV. During the Cruise

Equipment Maintenance

- Maintain the Siman inventory sheet and perform physical counts of supplies before/during/after each cruise.
- Be familiar with the equipment in the lab and learn how to fix it when problems arise. Document any equipment repairs and/or maintenance.
- Check for leaks in the anaerobic chamber, especially around all of the seals. Minor leaks can be fixed with silicone adhesive or tape.

- Change out gas bottles for the anaerobic chamber when necessary.
- Defrost the –86 freezer when necessary, otherwise ice builds up around the seals of the door preventing it from shutting properly. This is routinely done once every leg and probably best at the beginning of the leg when there are no samples being stored in it.
- Change the filters in the Barnstead water filter according to manufacturer's guidelines or as necessary.
- Make copies of shipping papers and other important documentation for the lab notebook. Originals go to the Lab Officer.

V. End of Leg Activities

- Remove all personal items from drawers, walls, and shelves.
- Clean the lab thoroughly. Wipe off all countertops, walls and equipment/instruments. Sweep and mop all floors.
- Dispose of all waste generated by sample preparation. This is extremely important to do at the end of each cruise, otherwise waste bottles/vials start to accumulate in the refrigerators or under the hoods. Do not be afraid to ask the scientists for assistance with disposal.
- Properly dispose of sample prep needles. This may have to be coordinated with the Lab Officer depending on rules and regulations of the port authority.
- Put away any unused supplies in their respective places. Fume hoods should be kept clear and are not to be used for storage of miscellaneous supplies. Tell the scientist(s) that whatever supplies they brought to the ship must also leave the ship with them, either in a personal box or in their luggage. Be very firm about this.
- Clean and put away all glassware. Discard any damaged glassware and order new if stock is low.
- Clean the anaerobic chamber inside and out. Leave it open.
- Defrost the –86 freezer if possible. Clean out the water baths and refrigerators.

VI. Port Call – Off Going

- Find the oncoming Marine Lab Specialist(s) for your lab and cross over. Make sure the technicians that are replacing you are aware of any changes made to the lab, procedures, current equipment status, and port purchases if necessary.
- Attend the port call meeting.
- Unload off going airfreight and frozen shipment, or any freight as required. Load on coming freight if time permits.

On Shore

- Read the scientific prospectus for upcoming microbiology cruises and order supplies accordingly. Many times, microbiologists will have very specific requests for supplies and will contact ODP headquarters with these requests. Coordinate with the current lab technician at sea, Lab Officer and the purchasing department to fulfill these requests.