HISTOLOGY LABORATORY

FACILITIES

CONTENTS

FACILITIES

1 Electrical outlets

1.1 Policy

Electrical outlets are checked for voltage, polarity, grounding, and tension. This is performed annually by the engineering department.

1.2 Procedure

1. Engineering performs an annual sweep on all electrical outlets.
2. The person conducting the electrical inspections will provide documentation to the histology supervisor.
3. The documentation is retained in this manual.
4. Engineering should be notified immediately of any electrical shocks or if an outlet is not working properly.

2 Equipment safety

2.1 Inspections

All electrical equipment must be inspected by the engineering department before being introduced into the laboratory. All electrical equipment will be inspected annually by engineering for proper grounding, and the equipment will be tagged with the date of inspection.

2.2 Records

A record for each piece of the equipment in the histology and grossing laboratories is maintained in a separate manual. The following Information is provided :

- the name of the equipment and serial number
- the date of purchase
- the warranty
- the service contract with phone number
- a maintenance record listing the date and type of service and who it was performed by

2.3 Maintenance

For equipment that has a service contract, the servicing company should be contacted for maintenance. Otherwise, the biomedical division of the engineering department should be contacted.

3 **Ventilation**

The ventilation system should provide between 4 to 12 air exchanges per hour.

3.1 Monitoring

Monitoring of air exchanges is performed annually by the engineering department. This must be requested each time it is to be done. If odors are present additional monitoring should be done. Documentation should be retained in this manual.

3.2 Fume hoods

Laboratory hoods are used to prevent hazardous vapors from entering the general laboratory area. With the sash down, they can also be used as a physical barrier against chemical reactions. The hoods have a constant airflow (there is no on/off switch) and are vented to the roof.

3.2.1 Maintenance

The engineering department is responsible for maintenance and certifying that hoods are operating properly. This is performed annually; each hood has a label indicating when it was last inspected. Engineering should be notified if a hood is not working.

3.2.2 Quality control

Safety hoods are monitored daily by histology personnel and results are recorded on the monthly quality control chart. Align the arrows by adjusting the sash. The vaneometer should read 100 lfm (linear feet per minute).

3.2.3 Policy

- If hood performance is inadequate hazardous vapors may enter the laboratory and the hood should not be used. Call engineering for servicing.
- Hoods should be on legs to allow airflow underneath them. Keep paper and other items from blocking the airflow.
- The sash should be pulled to the arrows when using the hood and closed when it is not in use.
- Work 6 inches from the hood opening. Moving an apparatus 6 inches from the front edge of the hood can reduce the vapor concentrations at the face by 90%.

3.2.4 Use of the hood

Always use the hood when

- microwave staining, leave hot solutions inside the hood until cooled;
- making heated solutions;
- grossing specimens, especially formalin fixed specimens;

3.2.5 References

National Research Council. 1981. *Prudent practices for handling Hazardous Chemicals in Laboratories*. Washington, D.C.: National Academy Press. 199-200.

University of Utah Safety Services. 1991. *Public safety, lab safety & health reporter.*

3.3 References

National Research Council. 1981. *Prudent practices for handling Hazardous Chemicals in Laboratories*. Washington, D.C.: National Academy Press. 194-198.

University of Utah Medical Center Department of Engineering.

4 **Water quality**

All of the histology procedures requiring distilled water refer to type I water. Distilled water runs through an under-the-counter deionizer tank. At the time of use, the deionized water runs though a 0.2µ particulate filter.

4.1 Testing

Distilled water should be tested monthly for resistance, bimonthly for colony forming units (CFU), and quarterly for silicates. The deionizer tank should be changed every 6 months.

A water quality report is issued monthly to the histology supervisor. The supervisor will review the report and verify that the acceptable limits have been met. Acceptable limits for type I water are

Resistance	>10
pH	N/A
CFU	<10
Silicates	<0.05 mg/L

If the water quality does not meet these limits, the report will indicate whether the filter or the tank is deficient. Any action taken should be documented on the report and on the Temperatures and Safety Maintenance chart in the quality control report.

4.2 Cleaning

The filters should be cleaned once a month with chlorine bleach. If the water quality report indicates positive growth and the filter was cleaned prior to the sampling, a new filter must be installed.

To clean filters

- unscrew the plug on the top of the filter
- pour chlorine bleach into the filter using a syringe or small funnel
- wait for ten minutes
- replace the plug in the top of the filter and allow the water to run for 10 minutes
- document the procedure on the laboratory maintenance quality control chart