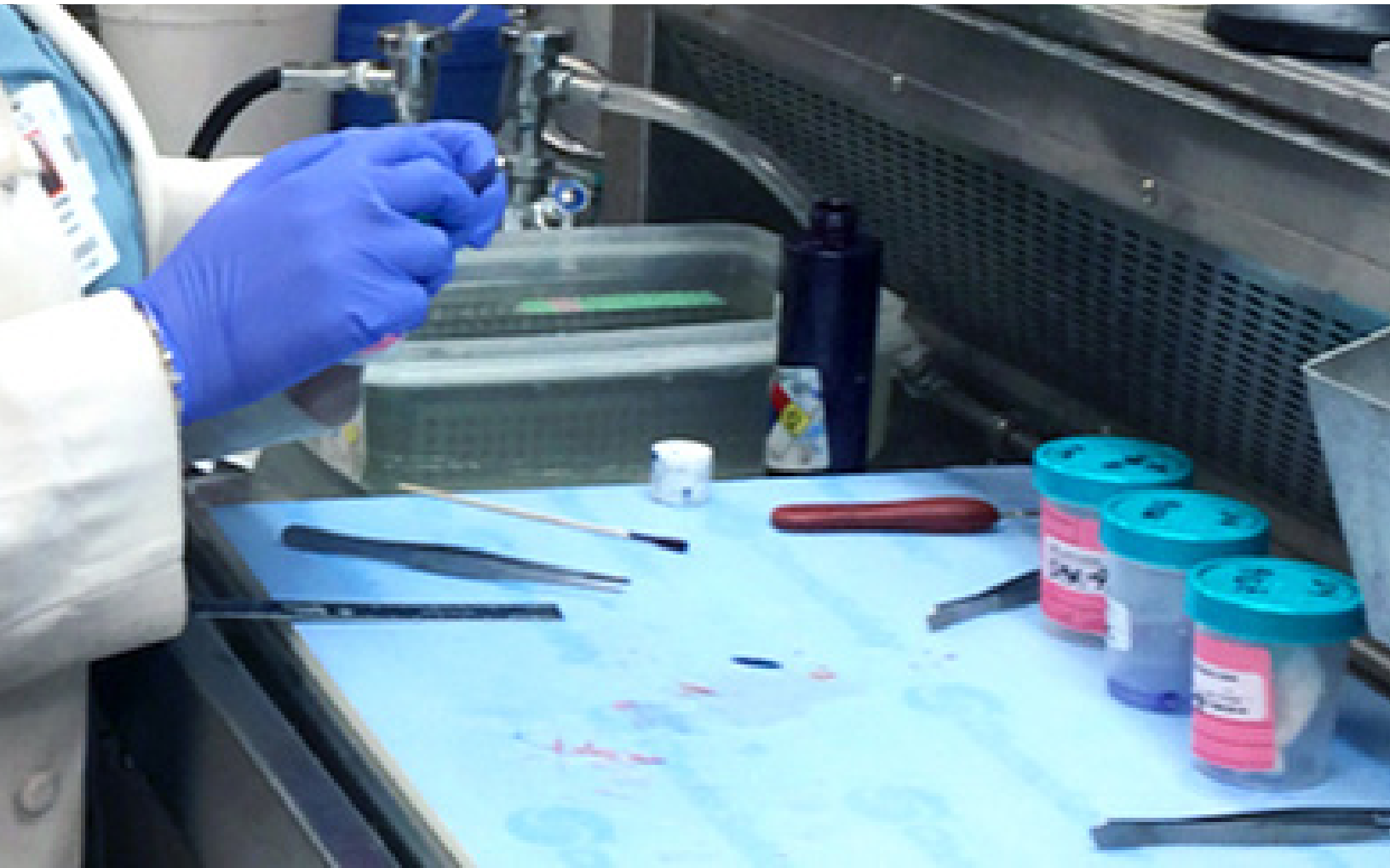
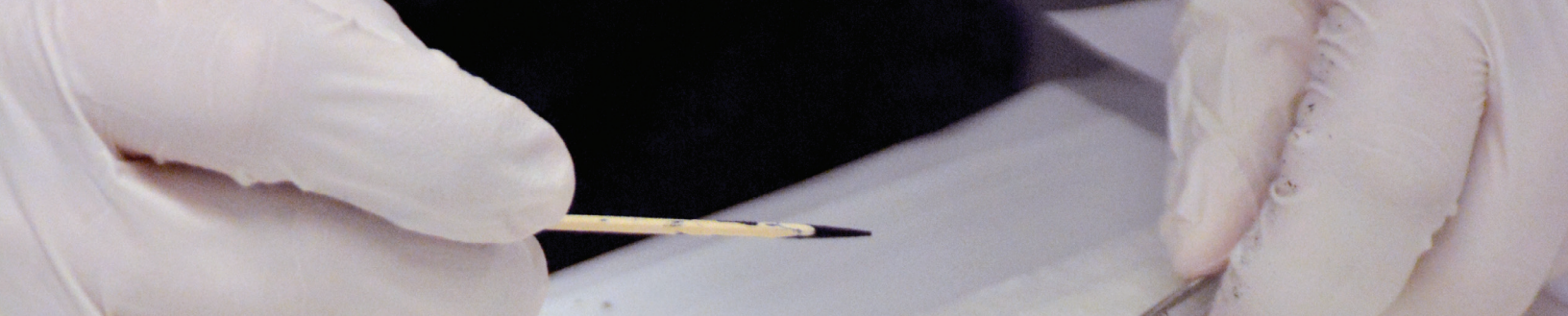


**Peace of Mind That You're Always Prepared:**  
An Educational Series on the Value of Routine PM Service  
**Part 2: Surgical Grossing**

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## Peace of Mind That You're Always Prepared::

### Part 2: Surgical Grossing

As we saw in the previous article, the primary goal of preventative maintenance is to prevent laboratory equipment failure before it can occur. This ensures the uninterrupted workflow of specimens through your histology laboratory, which contributes to providing the highest quality of patient care. Just as important, preventative maintenance of laboratory equipment guarantees the safety of your laboratory employees. This is especially true with regard to the equipment used in the surgical grossing of specimens.



The surgical grossing room is a mini-laboratory all within itself. Surgical grossing personnel and other laboratory personnel health is based on the use of personal protective equipment (PPE) and fresh air

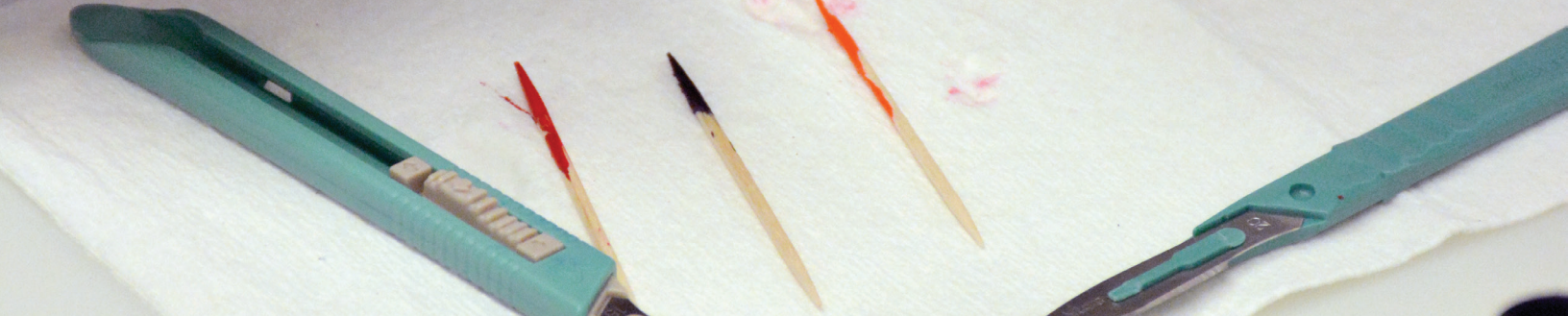
flow, as provided by engineering controls. In this case, engineering controls usually refer to the use of ventilated workstations, or “grossing hoods”. Generally, between 6 and 12 air changes per hour are recommended in the area in which formalin and other histology reagents are being handled. The grossing hood equipment must have a means of moving this air from behind the personnel, towards the front of them, away from the breathing zone. This ensures that personnel exposure to hazardous chemicals is kept below threshold limits established by OSHA. Thus, the first consideration in the grossing room is the preventative maintenance of the grossing hood itself. This equipment must be maintained such that the face velocity of air flow is maintained at a minimum of 100 cubic feet per minute (cfm). Your equipment vendor will have trained personnel and specialized equipment to make such measurements to ensure proper air flow.

Some grossing hoods are ventilated to the outside air. Other units recycle the air back into the laboratory space, in which case it must be filtered. Every grossing hood has the option of locating filters within the hood apparatus that filter the air prior to being released back into the laboratory. These filters are usually comprised of activated charcoal, mixed with potassium permanganate. This combination has been proven effective at removing formaldehyde fumes by binding them in the filter.

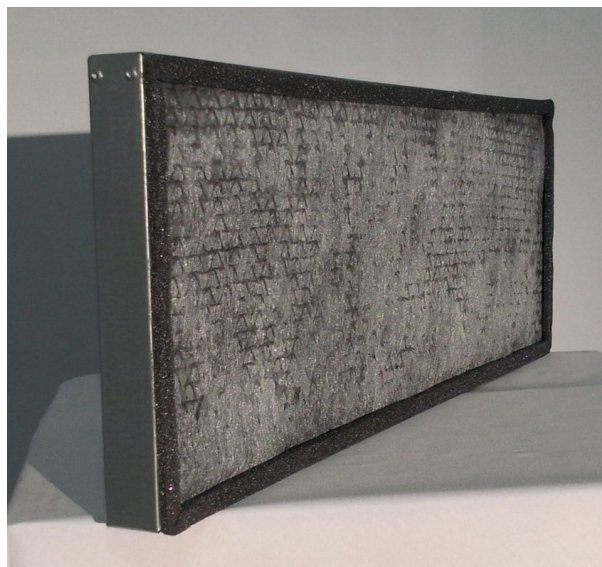
Use of such filters is perfectly acceptable in the histology laboratory. However, certain guidelines must be followed to ensure laboratory employee safety. Filters must be changed regularly. The exact time period between changes must be based upon the actual use of the filter. Once a filter becomes saturated with chemical fume residue, it is no longer effective. Additionally, there are many specialty filters available for histology laboratories. You will need to order and use the appropriate filters.

Your filter vendor is a valuable resource in this regard. You can describe to the vendor exactly what operations are occurring within your equipment, and the vendor should be able to recommend the exact specialty filters that you will need. The vendor will also have access to testing





information that will determine how often you will need to change the filters. Finally, the vendor will also provide the documentation for this task. They will provide stickers to attach to your equipment, along with log sheets for documentation. If your copy of the log sheet goes missing, you can contact the vendor who will send their documentation copy.



Using a vendor to provide preventative maintenance for filter exchange and grossing hood equipment will provide a consistent and safe laboratory workflow. This preventative maintenance will ensure that the grossing hoods are operating in a safe manner, which will keep employees safe. It will also help prevent equipment failures resulting from overloaded filters, which can “choke” the air flow inside the equipment.

It is always best to have vendor service contracts on such equipment. The vendor will be a great help in accurately scheduling filter changes and equipment preventative maintenance. Being proactive in this regard will also save money by avoiding emergency service calls; and help to prevent equipment failures which could compromise patient results and increase laboratory turnaround times. Furthermore, you should be able to combine this preventative maintenance with maintenance recommended for tissue processing equipment, as we shall see in

the next article in the series. This will help your laboratory budget to save money by combining equipment preventative maintenance visits by your vendor.

#### **ABOUT THE AUTHOR:**

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Clifford Chapman has over 40 years experience managing both private reference and teaching hospital pathology laboratories in the Boston area, including Massachusetts General Hospital, Pathology Services, Children’s Hospital Boston, and StrataDx.

He also has over 25 years experience presenting lectures, workshops, teleconferences and webinars at the local, regional and national level for the Massachusetts Society for Histotechnology, Region I Histology and National Society for Histotechnology.

Clifford is a specialist in histological techniques, quality management, laboratory workflow and laboratory safety. He is an author and co-author of over thirty scientific publications, including his most recent book “Dermatopathology Laboratory Techniques”. Clifford is currently the Technical Specialist at StrataDx and works as a consultant at Medi-Sci Consultants.

