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**DEPARTMENT: MEDICAL LABORATORY SCIENCE**

**COURSE TITLE: INTRODUCTION TO MEDICAL LABORATORY SCIENCE I**

**COURSE CODE: MLS 201**

**ASSIGNMENT**

**SLIDES AND COVER GLASS**:

It is especially important that microscope slides and cover glass used for the preparation of blood films or bacteriologic smears be

perfectly clean and free from scratches. Place all dirty microscope slides in a water basin full of warm water and detergent. Place them in the basin carefully so that none of them touch.

Leave the slides in the basin for an entire day. This should be sufficient time to allow the blood, oil or other material to loosen.

Use gauze to rub each slide individually on both sides until they are clean. Make sure you only leave the slides in the water for a few days at the most. If you leave the slides in water with detergent in it for weeks or longer, you risk letting the water evaporate. This will leave a detergent residue on the slides that will be difficult to remove.

Slides should be washed, placed in glacial acetic acid for 10 minutes, rinsed with distilled

water and wiped dry with clean paper towels or cloth. Once the slides have been washed, place them in a wide jar of alcohol. As

needed, remove from the jar and wipe dry. If the slides are dry stored, wash them with alcohol before use. Wrap cleaned slides in sheets of clean paper until they are ready to be used again. This allows you to store the slides closer together if a case isn’t available. Make sure to store slides somewhere dry. If you don’t, the slides will stick together due to humidity. You will then need to rewash the slides before they can be used, since they could be contaminated by the moist air

**CULTURE TUBES:**

Culture tubes which have been used previously must be sterilized before cleaning. The best method for sterilizing culture tubes

is by autoclaving for 30 minutes at 121°C (15 p.s.i. pressure). Media which solidifies on cooling should be poured out while

the tubes are hot. After the tubes are emptied, brush with detergent and water, rinse thoroughly with tap water, rinse with

distilled water, place in a basket and dry.

If tubes are to be filled with a media which is sterilized by autoclaving, do not plug until the media is added. Both media and

tubes are thus sterilized with one autoclaving.

If the tubes are to be filled with sterile media, plug and sterilize the tubes in the autoclave or dry air sterilizer before adding the

media.

**BLOOD CELL COUNT DILUTING PIPPETES**:

After use, rinse thoroughly with cool tap water, distilled water, alcohol, or acetone, and then ether. Dry by suction. Do not blow

into the pipets as this will cause moisture to condense on the inside of the pipet.

To remove particles of coagulated blood or dirt, a cleaning solution should be used. One type of solution will suffice in one

case, whereas a stronger solution may be required in another. It is best to fill the pipet with the cleaning solution and allow to

stand overnight. Sodium hypo chlorite (laundry bleach) or a detergent may be used. Hydrogen peroxide is also useful. In difficult

cases, use concentrated nitric acid. Some particles may require loosening with a horse hair or piece of fine wire. Take care not

to scratch the inside of the pipet.

**Automatic Pipet Washers:**

Where a large number of pipets are used daily, it is convenient to use an automatic pipet washer. Some of these, made of metal,

can be connected directly by permanent fixtures to the hot and cold water supplies. Others, such as those made with

polyethylene, can be attached to the water supplies by rubber hose. Polyethylene baskets and jars may be used for soaking and

rinsing pipets in chromic acid cleaning solution. Electrically heated metallic pipet dryers are also available.

After drying, place pipets in a dust-free drawer. Wrap serologic and bacteriologic pipets in paper or place in pipet cans and sterilize

in the dry air sterilizer. Pipets used for transferring infectious material should have a cotton plug placed in the top end of the pipet

before sterilizing. The plug will prevent the material being measured from being drawn accidentally into the pipetting device.

**SEROLOGICAL TUBES:**

Serological tubes should be chemically clean, but need not be sterile. However, specimens of blood which are to be kept for some

time at room temperature should be collected in a sterile container. It may be expedient to sterilize all tubes.

To clean and sterilize tubes containing blood, discard the clots in a waste container and place the tubes in a large basket. Put the

basket, with others, in a large bucket or boiler. Cover with water, add a fair quantity of soft soap or detergent and boil for 30

minutes. Rinse the tubes, clean with a brush, rinse and dry with the usual precautions.

It is imperative when washing serological glassware that all acids, alkali and detergents be completely removed. Acids, alkalis and

detergents in small amounts interfere with serologic reactions. Serologic tubes and glassware should be kept separate from all

other glassware and used only for serologic procedures.