

WIPP Industrial Safety Program and the WIPP Industrial Hygiene Program when performed within the WIPP Land Withdrawal Area.

2.3 Sample Preparation

- A. The specimen should be labeled according to NP 13-1, "Control of Samples and Standards".

2.4 Instrument Procedures

Follow the instructions in the Fisher Scientific Stereomaster Microscope operation manual. The instructions below are for typical operation. Details on how to perform these operations are contained in the above reference.

2.4.1 Instrument Start-up

Each user should adjust the diopter settings for their eyesight. Follow the instructions in the "Use / General Operation" section of the Fisher Scientific Stereomaster Microscope operation manual for adjustment of the diopter.

2.4.2 Light Source Types Available for Observation

- A. Transmitted Light:

The light from the illumination lamp is guided through the specimen to the objective. The light transmitted through the specimen is observed through the objective. Transmitted light is useful for observation of transparent specimens.

- B. Reflected Light:

The light from the illumination lamp is vertically directed onto the specimen. The light reflected from the specimen is observed through the objective. Reflected light is useful for observation of opaque specimen.

2.4.3 Observation

Refer to the "Use / General Operation" section of the Fisher Scientific Stereomaster Microscope operation manual.

- A. Direct all light up the eyepieces for viewing, by sliding the sliding prism to the "In" position.
- B. Place the specimen on the stage.
- C. Select the light source by turning the knob on the back, left of the base. The knob has four selections: OFF, I, \perp , or $\perp\perp$. Select OFF to turn off the light source power, select I to select transmitted light, select \perp to select reflected light, or select $\perp\perp$ to select both transmitted and reflected light.
- D. If reflected light is being used, position the incident illuminator light to the center of the stage.

- E. Adjust the light intensity with the variable light adjustment (left-side, front of the base) for comfortable viewing.
- F. While looking through the eyepieces of the binocular observation tubes, adjust the eyepieces closer or farther together to fuse the two circles of light into one circle.
- G. Use the focus control knob to bring the specimen into focus.
- H. Identify the portion of the specimen for observation by moving the specimen right or left and up or down across the observation area.
- I. Use the zoom control knob to increase or decrease the magnification. Magnification settings are labeled on the zoom control knob. Refocus as necessary after a change in the magnification.

2.4.4 Capturing Images

- A. Obtain a new roll of film. Label the film canister with a unique identifier (Roll Id), as follows:

MM/DD/YY-##

where:

MM is the current month

DD is the current day

YY is the current year and

is a sequential number beginning with 1, or 01.

If multiple rolls of film are used in a single day, the sequential number will be incremented by one for each new roll of film. The combination of Roll Id and the image/frame number will create a unique identifier for each image taken.

- B. Load roll of film into the camera following the manufacturer's instructions for operation of the camera.
- C. Direct all light up the vertical eyetube to the camera, by sliding the sliding prism to the "Out" position.
- D. Capture the image following the manufacturer's instructions for operation of the camera.
- E. The following information will be recorded in the scientific notebook or supplement for every image taken:
 - Date
 - Roll Id (see 2.4.4. step A)
 - Frame number
 - Sample Id
 - Sample description
 - Specimen preparation description or cross reference to location of this information
 - Light source selected
 - Magnification selected
 - Film Speed
 - Exposure time

- F. Film will be processed at a local Photo center, and the images will be transferred to a compact disk.
- G. The Photo center or Technical staff will create a proof sheet which contains thumbnail images of all the photos. The proof sheet will be labeled with the Roll Id and will be entered into the Scientific Notebook or Supplement.
- H. All images, regardless of their usefulness or quality, will be printed, labeled with Roll Id and frame number, and entered into the Scientific Notebook or Supplement.
- I. Images from multiple sessions can be captured on a single roll of film. However, if the Roll Id can not be seen once the film is loaded into the camera, then a temporary label should be applied to the camera body with the Roll Id. The number of the last frame taken should also be included on a temporary label to avoid confusion when a new session begins.

2.4.5 Instrument Shutdown

- A. Remove specimen from the stage.
- B. Turn off power to all light sources.

2.4.6 Microscope Maintenance

Refer to the "Maintenance" section of the Fisher Scientific Stereomaster Microscope operation manual for instructions on performing maintenance on the Stereomaster.

3.0 Records

The following records, generated through implementation of this procedure, shall be prepared and submitted to the WIPP Records Center in accordance with NP 17-1, "Records".

QA Record

- SN (Scientific Notebook)
- SNS (Scientific Notebook Supplement)
- Proof Sheet and Image(s) from Camera

Non Quality (NQ) Record

- Compact Disk Containing Digital Images

4.0 Appendices

None.

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