

## PERIPHERAL SMEAR PREPARATION

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| <input checked="" type="checkbox"/> St. Joseph Medical Center, Tacoma, WA | <input checked="" type="checkbox"/> St. Anthony Hospital Gig Harbor, WA | <input type="checkbox"/> Harrison Medical Center, Bremerton, WA  |
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### PURPOSE

To provide instruction for preparation of slides for manual differentials.

### SPECIMEN

EDTA-whole blood specimen, well mixed

### RELATED PROCEDURES

DXH SMS – Sample Processing

### SUPPLIES

- Glass slides, pencil
- Capillary tubes, or Wood applicator sticks
- Safety shield
- Diff Dropper Dispenser
- Albumin

### INSTRUCTIONS

**NOTE:** SJMC only: See “DXH SMS – Sample Processing” for automated slide making and staining.

1. Place one drop of blood (2-3 mm in diameter) at the end of a slide by one of the following methods:
  - Dispense the drop with a capillary tube or applicator stick or by
  - Using a Diff Dropper Dispenser:
    - Hold the tube upright and insert the Diff Dropper into all the way through the stopper.
    - Invert and position the Diff Dropper on the target area of the slide
    - Gently press the tube downward until a drop forms at the top of the Diff Dropper
    - Relax the pressure the instant the drop touches the slide
2. Draw a clean spreader slide toward the drop at a 30-degree angle until it touches the drop of blood.
3. Allow the blood behind the slide to spread the width of the slide.
4. Push the spreader slide smoothly and quickly down the slide producing a feathered edge.
5. Label the slide with the patient’s first and last name and complete accession number or complete LIS ID number (Specimen ID/Instrument ID). **NOTE: If patient’s name is very long, write entire Last Name and First**

**Initial.)** For SMS users: Scan the barcode, or manually enter the patient name and complete accession number. All slides require two patient identifiers.

6. Allow the slide to air dry.
7. Stain the slide using Wright (SMS) or Wright-Giemsa (manual) stain.

**NOTE:** If numerous smudge cells are seen, addition of albumin may help stabilize the lymphocytes. Add 9 drops of EDTA whole blood and 1 drop of albumin and mix well. Follow above steps 1-7 for making a peripheral smear. Be sure to label slides as “albumin slides”. Blasts should never be identified on an albumin slide. Morphology should never be determined on an albumin slide.

## REFERENCES

Rodak, Bernedette F. Hematology, Clinical Principles and Applications. W. B. Saunders, 2<sup>nd</sup> ed., 2002, pp. 173-174.

LCM Pathologists, PC. Peripheral Smear/Bone Marrow Evaluation. [www.lcmpath.com/bone](http://www.lcmpath.com/bone)

Diff-Safe Blood Dispenser, package insert, Alpha Scientific Corporation. [www.Alpha-Scientific.com](http://www.Alpha-Scientific.com)