

Wright and Wright-Giemsa Hematology Stain Solutions

Wright and Giemsa stains are Romanowsky stains used to stain peripheral blood and bone marrow smears. The most important components of these stains are oxidized methylene blue, azure B and eosin Y dyes. The eosin Y dye stains the cytoplasm of cells an orange to pink color. The methylene blue and azure B dyes stain the nucleus varying shades of blue to purple. Romanowsky stains are used to perform differential white blood cell counts and to study red blood cell morphology.

Recommended protocols are applicable for all specimens requiring a routine Wright's or Wright-Giemsa stain. Times are approximate and can be adjusted to meet your individual staining requirements. pH buffer selection will also affect your staining results. Suitable specimen is fresh whole anticoagulated blood prepared as a push smear or bone marrow. Thicker smears may require longer staining time.

Materials Needed:

ES923	Wright-Giemsa Stain, 4x1gal/cs
ES920	Wright's Stain, 4x1gal/cs
ES938	Wright's Stain Fixative, 4x1gal/cs
ES9275	pH 6.8 Phosphate Buffer, 4x1gal/cs

Additional materials (for manual staining):

Plain microscope slides
Staining Coplin jars
Slide rack or forceps
DI or Laboratory grade water

Suggested Manual Method

Single slide:

1. Fix slides in Methyl Alcohol or Wright's Stain fixative, approx. 1 minute.
2. Flood slides with Wright's or Wright-Giemsa stain for 2 to 3 minutes
3. Flood slide with selected buffer and mix.
4. Allow to stain for 2 to 5 minutes, depending upon the stain intensity required.
5. Rinse in DI water, allow to air dry.

Staining Jar Method:

1. Fix slides in Methyl Alcohol or Wright's Stain fixative - approx. 1 minute.
2. Submerge slides with Wright or Wright-Giemsa stain -2 to 3 minutes
3. Submerge slides in Stain/Buffer mix (20/80) 2 - 5 minutes
4. Rinse in DI water, allow to air dry.

Suggested Automated Method

Protocol:

1. Fixative- Methyl Alcohol or Wright's Stain fixative - 30 seconds to 1 minute
2. Stain- (as received) 3 to 4 minutes
3. Stain/Buffer- (20% stain diluted with 80% low molarity buffer) 4 to 6 minutes
4. Rinse- deionized water - 30 to 60 seconds
5. Dry - 3 minutes

Reviewed 11/06/2019