

**DESCRIPTION**

Gill hematoxylin is a general purpose progressive type nuclear stain and available in 3 strengths, Gill 1X, 2X, and 3X. Cell blocks are usually stained using Gill 1X Hematoxylin accompanied with Eosin to demonstrate the cellular detail for cytology analysis. Gill 2X and Gill 3X are routinely used for histological specimen. The Gill 2X can be used when a darker nuclear stain is desired and Gill 3X when an even richer or more intense nuclear stain is required. This hematoxylin gives clear and sharp nuclear staining with little to no background. Gill's Hematoxylin permits longer shelf life with greater control of staining performance and reproducibility. It stains chromatin at a controlled rate and within a narrow range of optical densities.<sup>1,2</sup>

**PROCEDURE**

1. **Paraffin slides:** Deparaffinize in xylene, then rehydrate through graded alcohols to water.  
**Frozen slides:** Fix in Ethanol 95% (or other fixative according to lab preference) and rinse in water.
2. Stain in Hematoxylin solution, Gill 2X or Gill 3X: 1 to 4 minutes
3. Rinse in two changes of DI water: 1 minute each  
*Note: this could also be done using running tap water, but we recommend DI water to avoid the varying pH tap water can have*
4. Bluing Reagent (until tissue turns blue): 15 to 60 seconds
5. Rinse in two changes of DI water: 30-60 seconds  
*Note: this could also be done using running tap water.*
6. Ethanol 95%: 30 to 60 seconds
7. Eosin Y 1% Alcoholic, Eosin Y Intensified, or Eosin-Phloxine: 30 to 60 seconds  
*Note: for an increased definition of cytoplasmic components over Eosin Y 1%, select Eosin Y Intensified or Eosin-Phloxine as an alternative.*
8. Dehydrate in Ethanol 95%, two changes: 10 dips each
9. Dehydrate in Ethanol 100%, two changes: 1 minute each
10. Clear in Xylene or Xylene Substitute, two changes: 1 minute each
11. Coverslip using Acrylic Mounting Medium and examine under microscope.

**RESULTS**

Nuclei, nuclear components – blue to dark purple  
Cytoplasm, red blood cells, collagen, elastic fiber, muscle – shades of pink

**REFERENCES**

1. Baker, J.R.: Quart, J.Micr. Sci. 103:493-517, 1962
2. Baker, J.R. and Jordan, B.M.: Quart, J Micr Sci. 94:237-242, 1953

**ORDERING INFORMATION**

Cat. #	Description	Sizes
3315	Deionized Water	1 Gallon, 5 Gallon, 30 Gallon
7013	Hematoxylin, Gill 2X	16oz, 32oz, 1 Gallon, 5 Gallon
7014	Hematoxylin, Gill 3X	16oz, 32oz, 1 Gallon, 5 Gallon
3356	Bluing Reagent	32oz, 1 Gallon
7006	Eosin Y, 1% Alcoholic	16oz, 32oz, 1 Gallon
7007	Eosin Y, Intensified	16oz, 32oz, 1 Gallon
7009	Eosin - Phloxine	16oz, 32oz, 1 Gallon, 2.5 Gallon
3340	Ethanol Solution, 95%	1 Gallon, 5 Gallon
3341	Ethanol Solution, 100%	1 Gallon, 5 Gallon
3346	Xylene	1 Gallon, 5 Gallon
3349	Acrylic Mounting Medium	4oz, 16oz

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