

DESCRIPTION

George Papanicolaou, after whom the famous Papanicolaou (Pap) smear and Pap stain was named, was one of the initial pioneers who drew the attention to the science of the ability to make a diagnosis looking at slides with a smear of cells in the period between 1917 and 1928.¹ Rates of cancer death due to cervical cancer dropped tremendously after the 1960s when the Papanicolaou smears screening programs had started.²⁻⁸

Papanicolaou stain is superior in demonstrating the nuclear details, which are the most important and specific in making the diagnosis of malignancy. Whereas, the routine Hematoxylin and Eosin (H&E) stain gives the pathologist an advantage of evaluating tissue-like stains from cell blocks, similar to routine biopsies. Cytological specimens are taken from different sites as a follow up for different diseases and for determination of different prognostic factors in neoplasia diagnosis.⁹

OG-6 and EA are the two cytoplasmic counterstain solutions that are used sequentially in the Papanicolaou staining method for clinical cytology.¹⁰⁻¹²

Gill 1X is used for routine cytology staining to accompany EA-36 or EA-50 (for gynecological), or EA-65 (for non-gynecological) and OG-6. This single strength hematoxylin formulation optimally stains gynecological and non-gynecological specimens alike. Gill hematoxylin is a general purpose progressive type nuclear stain and presented in 3 strengths, Gill 1X, 2X, and 3X. Cell blocks are usually stained using Gill 1X Hematoxylin accompanied with Eosin to demonstrate the routine H&E stain for cytology analysis. The Gill 2X can be used when a darker nuclear stain is desired.

PROCEDURE

1. Fix cytological smears in 95% Ethanol: 15 minutes
2. Rinse gently in DI water: 30 seconds
3. Stain in hematoxylin solution, Gill 1X or Gill 2X: 1½ to 3 minutes
4. Rinse gently in DI water: 1 minute
5. Bluing Reagent: 15 to 60 seconds
6. Rinse gently in DI water: 30 seconds
7. Ethanol Solution, 95%: 10 dips
8. Papanicolaou Stain OG-6: 1 to 2 minutes
9. Ethanol Solution, 95%: 10 dips
10. Papanicolaou Stain EA 50 or Papanicolaou Stain EA 65 EA: 2½ to 3 minutes
Note: Use EA 50 for gynecological samples; and EA 65 for non-gynecological samples. (the number indicates the proportion of the dyes)
11. Ethanol Solution, 95%, two changes: 10 dips each
12. Ethanol Solution, 100%, two changes: 1 minute each
13. Xylene or Xylene substitute, two changes: 1 minutes each
14. Coverslip using Acrylic Mounting Medium, and examine under microscope

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ORDERING INFORMATION

| Cat. # | Description | Size |
|--------|-------------------------|-------------------------------------|
| 3315 | Deionized Water | 32oz, 1 Gallon, 5 Gallon, 30 Gallon |
| 7012 | Hematoxylin, Gill 1X | 32oz, 1 Gallon |
| 7013 | Hematoxylin, Gill 2X | 32oz, 1 Gallon |
| 3356 | Bluing Reagent | 32oz, 1 Gallon |
| 7042 | Pap Stain, OG-6 | 32oz, 1 Gallon, 2.5 Gallon |
| 7026 | Pap Stain, EA-36 | 32oz, 1 Gallon |
| 7028 | Pap Stain, EA-50 | 32oz, 1 Gallon, 2.5 Gallon |
| 7030 | Pap Stain EA-65 | 32oz, 1 Gallon, 2.5 Gallon |
| 3340 | Ethanol Solution, 95% | 32oz, 1 Gallon, 5 Gallon |
| 3341 | Ethanol Solution, 100% | 32oz, 1 Gallon, 5 Gallon |
| 3346 | Xylene | 16oz, 1 Gallon, 5 Gallon |
| 3349 | Acrylic Mounting Medium | 4oz, 16oz |

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