

PAP GnomePen™ Liquid Blocker – Technical Memo

PRODUCTS:

PAP GnomePen™ – Blue
PAP GnomePen™ – Green
PAP GnomePen™ – Orange
PAP GnomePen™ – Purple
PAP GnomePen™ – Red
PAP GnomePen™ – Yellow

EACH

Part 6507B
Part 6507G
Part 6507O
Part 6507P
Part 6507R
Part 6507Y

APPLICATION:

Newcomer Supply PAP GnomePen™ Liquid Blocker, when applied around tissue sections on a microscopic slide prior to staining procedures, creates a very thin visible hydrophobic film that ensures the amount of reagent needed for sufficient reaction is greatly reduced and is retained for complete tissue section coverage. The GnomePen™ has one of the thinnest PAP pen tips available and easily allows for adjacent circles, lines or any drawn pattern to be applied on a single slide.

The GnomePen™ contains a unique formulation that is water repellent, insoluble in alcohol and acetone and soluble in xylene. A variety of barrier colors are available, allowing for color coding and specimen differentiation on the same microscopic slide. Each GnomePen™ contains approximately 350 applications in a transparent container that provides an accurate visual estimate of remaining solution volume.

METHOD:

Technique: Paraffin, frozen sections and tissue culture cells

- Manual staining for:
 - Immunohistochemistry (IHC) procedures
 - Immunofluorescence Assay (IFA) procedures

PROCEDURE:

1. Shake pen thoroughly before use.
2. Practice applying the GnomePen™ liquid barrier on a test slide; push pen tip against the glass and apply a thin liquid barrier that will dry to a film. If flow doesn't instantly begin, gently squeeze the pen body.
3. Store GnomePen™ tightly capped; vertically with cap end up.
4. **Paraffin Section Method:**
 - a. *Deparaffinize sections thoroughly in three changes of xylene, 3 minutes each. Hydrate through two changes each of 100% and 95% ethyl alcohols, 10 dips each. Wash well with distilled water.*
 - b. *Remove the slide from water or buffer; blot excess solution from the slide and around tissue section with water absorbent materials. Or place long edges of the slide on absorbent material to remove excess moisture.*
 - c. *The liquid barrier can be drawn on a slightly damp slide.*
 - d. *Encircle the tissue section(s) on the slide surface with the GnomePen™ as illustrated. Take care not to touch the pen to any edge of the tissue.*
 - e. *See Procedure Notes #1 and #2.*
5. **Frozen Section and Tissue Culture Cells:**
 - a. *Encircle the frozen tissue section(s) or tissue culture cells on the slide surface at room temperature with the GnomePen™ as illustrated. Take care not to touch the pen to any edges of the tissue or culture cells.*
 - b. *See Procedure Notes #1 and #2.*
 - c. *The liquid barrier should be applied before fixation or prior to the immersion of the slide into water or buffer.*
6. After liquid barrier application, allow the slide to dry in a flat position for 30-60 seconds at room temperature. Proceed with staining procedure when the drawn barrier has completely dried.
 - a. *See Procedure Note #3.*

7. Drain/rinse reagents off between staining steps; blotting slide and tissue as needed to remove excess solution.
 - a. *See Procedure Note #4.*
8. Complete staining process and coverslip with a compatible mounting medium. GnomePen™ barrier film will not affect the coverslipping procedure.

PROCEDURE NOTES:

1. Once a tissue section is touched with GnomePen™ liquid barrier it cannot be removed. The section remains useable but a slight colorization will result on the touched portion of tissue.
2. If the tissue section is not completely encircled or segregated by the GnomePen™ barrier film, reagents will not be fully retained on the tissue section and will flood out onto the slide. This may compromise complete and adequate tissue coverage by reagents.
3. If GnomePen™ barrier lines are not completely dry prior to staining, a precipitate from reaction with detection reagents may occur.
4. The use of a Slide Moisture Chamber or StainTray™ (Part 68431, 6848 or 6847) is recommended for manual staining to maintain slide organization and a moist environment during the staining process.
5. GnomePen™ is insensitive to detergents (Triton X-100, Tween 20), varying pH and temperature.

REFERENCES:

1. Grizzle, William, Cecil Stockard, and Paul Billings. "The Effects of Tissue Processing Variables Other Than Fixation on Histochemical Staining and Immunohistochemical Detection of Antigens." *The Journal of Histochemistry* 24.3 (2001): 213-219.
2. Modifications developed by Newcomer Supply Laboratory.

