

FORENSIC BIOLOGY SEROLOGY PROCEDURES MANUAL

CHRISTMAS TREE STAIN FOR SPERMATOZOA

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Christmas Tree Stain for Spermatozoa

The nuclear material within the cell is stained red by the Nuclear Fast Red stain. Sperm heads are usually well differentiated with the acrosome staining significantly less dense than the distal region of the head. Epithelial membranes and sperm tails are stained green by the Picric Indigo Carmine (PIC) stain; nuclei inside epithelial cells appear purple. Yeast cells also stain red, however the stain is uniform throughout the cell and extends into polyp-like structures that are occasionally seen in yeast.

Reagents: Nuclear Fast Red and Picric Indigo Carmine

1. Fix cells to the slide by heating (approximately 5 to 10 seconds).
2. Cover cell debris with Nuclear Fast Red stain and allow to sit for at least 10 minutes.
3. Wash away the nuclear fast red with deionized water.
4. Add PIC stain to the still-wet slide; allow to sit for no more than 30 seconds.
5. Wash away the PIC stain with ethanol.
6. Place slide over a heat source to complete drying.
7. Examine the slide at 100X or 400X (don't use immersion oil).