LUGOL'S IODINE STAIN

- For in vitro use only - Catalogue No. SL95

Our Lugol's Iodine Stain is intended to be used with wet mount preparations and concentration techniques for the detection of intestinal protozoa and helminth ova and larvae.

Lugol's Iodine is a rapid, non-specific contrast dye that is added to direct wet mounts of fecal material to aid in differentiating parasitic cysts from host white blood cells. Many protozoa and cysts take up the dye and appear brown while other objects in the sample remain clear. Iodine stains protozoan nuclei and intracytoplasmic organelles brown making them easier to identify.

Our Lugol's Iodine is a concentrated formulation that needs to be diluted prior to use. Dilution is a necessity since strong iodine solutions tend to coagulate fecal particles and destroy the refractile nature of protozoan organisms.

For fresh, unpreserved fecal samples, a direct wet mount should be prepared to detect the presence of motile protozoan trophozites. Make sure the wet mount preparation of the sample has been thoroughly examined before adding Lugol's Iodine, since iodine tends to paralyze the motility of parasitic organisms and may obscure some parasitic structures.

Formula per 100 mL

Iodine Crystals..... 5.0 g
Potassium Iodide ..... 10.0 g

Recommended Procedure

1. Prior to use, dilute Lugol's Iodine 1:5 with sterile de-ionized water. (This working solution should be prepared fresh approximately every 3 weeks)
2. Prepare a direct smear of the specimen by mixing a small portion (2 mg) of feces with a drop of sterile physiological (0.85%) saline on a clean glass slide.
3. Place a coverslip over the sample and examine the wet mount preparation for the presence of motile protozoa. The organisms are very pale and transparent and are more easily observed under low light intensity.
4. Once the wet mount has been thoroughly examined, a drop of Lugol's Iodine (working solution) can be placed at the edge of the coverslip, or a new mount can be prepared using iodine alone. The prepared slide can be sealed if desired.
5. Examine the slide for the presence of brown parasitic structures.

Interpretation of Results

The majority of parasitic organisms and cysts adopt a brown coloration when stained with Lugol's Iodine. When stained correctly, protozoan cysts contain yellow-gold cytoplasm, brown glycogen material, and paler refractile nuclei.

- *If the working solution lightens or if atypical results are observed with known controls then a fresh working solution should be prepared*
- *Preserved specimens do not require the preparation of a wet mount since motile protozoa will not be visible*
- *A permanent stained smear of the sample should be examined to confirm the identity of the suspected organisms*

Quality Control

Internal quality control of the working solution of Lugol's Iodine must be performed regularly on known reference organisms to ensure the performance of the stain.

Storage and Shelf life

Our Lugol's Iodine Stain should be stored at room temperature and protected from light. Under these conditions it has a shelf life of 26 weeks from the date of manufacture. The diluted working solution of Lugol's Iodine has a shelf life of approximately 3 to 4 weeks.

References

1. Garcia LS, Bruckner DA. Diagnostic medical parasitology. New York: Elsevier, 1988.
2. Forbes BA, Sahm DF, Weissfeld AS. Bailey and Scott's diagnostic microbiology. 10th ed. St. Louis: Mosby, 1998.
3. Murray PR, Baron EJ, Pfaller MA, Tenover FC, Yolken RH. Manual of clinical microbiology. 7th ed. Washington: ASM, 1999.

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