Being Fixated on Stool Stains: How to be sane in the insane world of stool fixation and preservation!

ASCLS Region X

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I. Ova and Parasite Exam

A. Direct Exam
   1. Sterile Saline
   2. Iodine

B. Concentrate Exam
   1. Flotation using Zinc sulfate
   2. Formalin/Ethyl acetate sedimentation

C. Permanent Stain
   1. Trichrome stain
      a. Reagents
   2. Iron hematoxylin stain

II. The Protozoa
    (Phylum Sarcomastigophora: amebae and flagellates)

A. The Amebae
   1. Entamoeba histolytica
   2. Entamoeba coli
   3. Entamoeba harmanni
   4. Entamoeba polecki
   5. Endolimax nana
   6. Iodamoeba buetschlii

B. The Flagellates
   1. Dientamoeba fragilis
   2. Giardia lamblia
   3. Chilomastix mesnili

C. Blastocystis hominis
III. Stool Preservatives/Fixatives

A. LV-PVA
B. Schaudinn’s
C. MIF (merthiolate-iodine-formaldehyde)
D. SAF (sodium acetate-acetic acid-formalin)
E. STF (Streck Tissue Fixative)
F. Modified PVA (copper, zinc)
G. Single-Vial-Fixatives

IV. The Trichrome (Fine Tuning)

A. Quality Control
B. Slide prep
C. Other Factors

V. Permanent Stain/Fixative Comparisons

A. STF (Streck Tissue Fixative) vs PVA
B. Various Fixative/Protozoa and Permanent Stain Comparisons
C. Protozoa Morphology/Identification Techniques

VI. Final Comments
References


• Centers for Disease Control & Prevention, National Center for Infectious Diseases, Division of Parasitic Diseases website (DPDx Laboratory Identification of Parasites of Public Health Concern).

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• Para Site online, website (Lynne S. Garcia, M.S., MT(ASCP), CLS(NCA), BLM(AAB), F(AAM), Director, Consultation and Training Services (Diagnostic Medical Parasitology and Health Care Administration).