



Fusion Parasitology Suite

A suite of AI-assisted screening tools designed to reduce technologist read time, especially for negative slides.

Increased Accuracy and Efficiency

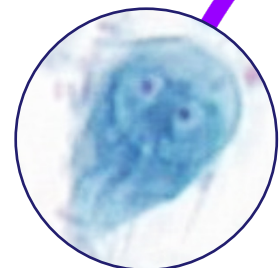
Techcyte's Fusion Parasitology Suite is a group of revolutionary screening tools designed to help medical technologists read fecal slides more efficiently and accurately using our three AI-based algorithms, lab-optimized workflow, and LIS integration.

Current Methods

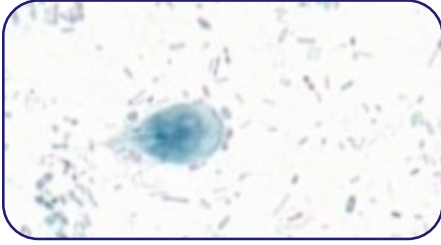
- ✓ Manual review of both positive and negative slides
- ✓ Prone to eye strain, fatigue, distractions
- ✓ Intense workloads and operator biases
- ✓ Susceptible to human error

Techcyte Solution

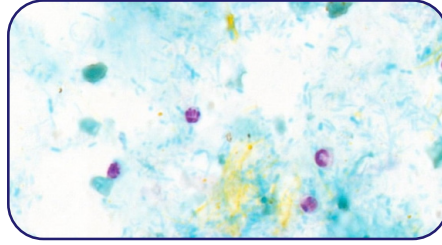
- ✓ Quickly eliminates negative cases, switching focus to positive cases
- ✓ AI doesn't get overworked or tired
- ✓ Delivers consistent results
- ✓ Less microscope time means better working conditions



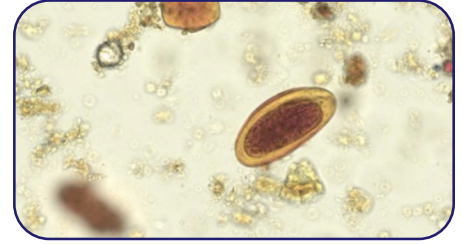
Our Solutions



Trichrome



Modified Acid Fast (MAF)



Wet Mount Iodine

How it Works

Our AI algorithm uses a convolutional neural network to identify differentiating features and determine which combinations indicate a certain ova, parasites, or other diagnostically significant objects in just minutes.

The results are then presented to a trained technologist for review. Positive slides are manually reviewed by a technologist using a microscope to confirm findings.

Our 4-Step Process



Create Slides

Slides are prepped using the Apacor Parasep Pro method, then stained using one of the recommended staining protocols.



Scan Slides

Slides are loaded into a compatible scanner, and the resulting images are automatically uploaded for AI analysis.



AI Analysis

The AI algorithm identifies and classifies diagnostically relevant objects for technologist review, providing results in just minutes.



Tech Reviews

Technologists confirm presence of objects of interest and, if required, their prevalence. Positive samples are manually reviewed by a technologist.



Supported Scanners

Trichrome



**Hamamatsu
S360**
80x scanning,
40x .95 NA objective



**3DHistech
P250, P1000**
80x scanning,
40x .95 NA objective



**Pramana HT2, HT4,
Spectral-M Pro**
80x scanning, 40x 0.95
NA objective

Wet Mount Iodine



**Hamamatsu
S360, S20**
40x scanning
.95 NA objective



**Grundium
Ocus 40**
40x scanning
20x 0.75 NA objective



**Pramana HT2, HT4,
Spectral-M Pro**
40x scanning, 20x 0.8 NA
objective

MAF



**3DHistech
P250, P1000**
40x scanning
.95 nNA objective

Organisms We Look For *

Trichrome

- Blastocystis sp.
- Giardia duodenalis
- Combined D.frag, Ib, E.nana troph
 - Dientamoeba fragilis
 - Endolimax nana
 - Iodamoeba buetschlii
- Entamoeba hartmanni
 - Entamoeba coli
 - Entamoeba polecki
- Entamoeba histolytica-complex (4 other morphologically similar species)
- Chilomastix mesnili
- Cyclospora cayetanensis (advisory)
- White Blood Cells
- Red Blood Cells

Modified Acid Fast

- Cryptosporidium sp. oocysts
- Cyclospora cayetanensis oocysts

Wet Mount

- Ascaris lumbricoides, fertile egg mammillated
- Ascaris lumbricoides, infertile egg mammillated
- Balantioides coli cysts and trophs
- Blastocystis
- Capillaria philippinensis egg (Paracapillaria philippinensis)
- Chilomastix mesnili cysts and trophs
- Clonorchis / Opisthorchis spp. egg
- Cyclospora Cayetanensis oocysts
- Cystoisospora belli oocysts
- Endolimax nana cysts
- Entamoeba cysts and trophs
 - Entamoeba coli
 - Entamoeba histolytica/dispar
 - Entamoeba Polecki
- Enterobius vermicularis egg (Pinworm)
- Fasciola/Fasciolopsis spp. egg
- Fish tapeworm egg
- Giardia cysts and trophs
- Hookworm egg
- Hymenolepis diminuta
- Iodamoeba buetschlii cyst
- Paragonimus spp. egg
- Rodentolepsis nana egg
- Schistosoma mansoni egg
- Misc. Small Protozoans
 - Dientamoeba fragilis troph
 - Endolimax nana troph
 - Entamoeba hartmanni cysts and trophs
 - Iodamoeba buetschlii troph
 - Hymenolepis nana egg (Rodentolepis Nana)
 - Schistosoma japonicum/mekongi egg
 - Strongyloides stercoralis larva
 - Taenia spp. Egg
 - Trichostrongylus sp
 - Trichuris trichiura egg

* these have not been examined by the FDA

Compliance



Features

- ✓ Hosted on a state-of-the-art clinical pathology AI platform
- ✓ AI-proposed images of parasites and objects of interest, grouped by class and sorted by confidence
- ✓ 15 – 30-second read times
- ✓ High sensitivity and slide-level specificity
- ✓ Increased sensitivity over manual examination
- ✓ Multi-scan review automatically combines trichrome and wet mount into a single patient case
- ✓ Levels out sample and stain variations
- ✓ Excels at low-prevalence samples
- ✓ High volume, high reliability scanners produce 80x & 40x equivalent digital images



Benefits

- ✓ Improved accuracy, efficiency and consistency of reads
- ✓ Quick elimination of negative slides
- ✓ Increased contribution margin per test
- ✓ More time available for analyzing positive cases
- ✓ Less microscopy time can reduce stress and fatigue
- ✓ Can impact hiring, training, and retention of lab techs and technologists
- ✓ Enables remote work and consults

**Questions? Interested in a demo?
Contact us today. We'd love to talk.**

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