

Fecal Ova & Parasite Detection

An AI-assisted screening tool that reduces technologist read time from 5 minutes to under 30 seconds.

Increased Accuracy and Efficiency

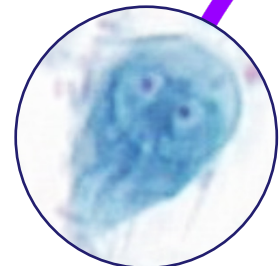
Techcyte's Fecal Ova & Parasite Detection solution is a revolutionary screening tool that is being developed to help medical technologists read fecal slides more efficiently and accurately using our AI-based algorithm, lab-optimized workflow, and LIS integration.

Current Methods

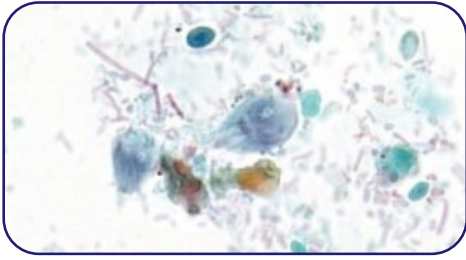
- ✓ Manual review of both positive and negative slides
- ✓ Prone to eye strain, fatigue, distractions
- ✓ Intense workloads and operator biases
- ✓ Susceptible to human error

Techcyte Solution

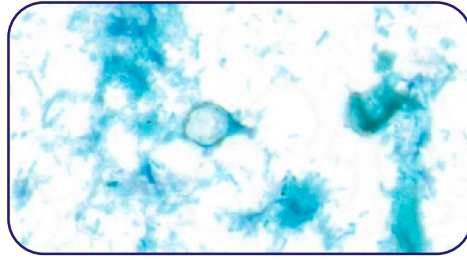
- ✓ Quickly eliminates negative cases, switches focus to positive cases
- ✓ AI doesn't get overworked or tired
- ✓ Delivers consistent results
- ✓ Better working conditions



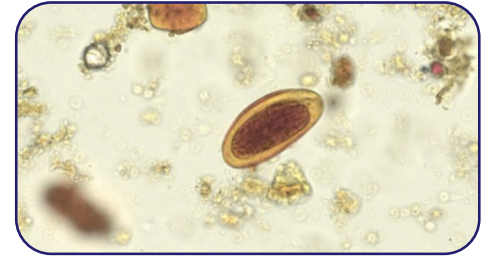
Our Tests



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 a standard trichrome or Modified Acid Fast CDC staining protocol.



Scan Slides

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



AI Analysis

Our AI algorithm is deterministic, making the same classification every time it is shown the same image.



Cytologist Reviews

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



Supported Scanners

Trichrome



Hamamatsu S360

40x scanning
.95 NA objective



3DHitech P250, P1000

40x scanning
.95 nNA objective

MAF



3DHitech P250, P1000

40x scanning
.95 nNA objective

Wet Mount Iodine



Hamamatsu S360

40x scanning
.95 NA objective



Grundium Ocus 40

40x scanning
20x 0.75 NA objective



Pramana SpectralM

80x scanning, 40x 0.95
NA 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

*these have not been examined by the FDA

Wet Mount

- Ascaris lumbricoides, fertile egg mammillated
- Ascaris lumbricoides, infertile egg mammillated
- Balantioides coli cyst
- Balantioides coli troph
- Blastocystis
- Capillaria philippinensis egg
- Chilomastix mesnili cyst
- Chilomastix mesnili troph
- Clonorchis / Opisthorchis spp. egg
- Cyclospora Cayetanensis oocysts
- Cystoisospora belli oocysts
- Combined D.frag, Ib, E.nana troph
 - Dientamoeba fragilis
 - Endolimax nana
 - Iodamoeba buetschlii
- Entamoeba cysts
- Entamoeba nana cysts
- Entamoeba trophs
- Enterobius vermicularis egg (Pinworm)
- Fish tapeworm egg
- Giardia Cysts
- Giardia Trophs
- Hookworm egg
- Hymenolepis diminuta
- Hymenolepis nana egg
- Paragonimus spp. egg
- Schistosoma mansoni egg
- Schistosoma japonicum/ mekongi egg
- Strongyloides stercoralis larvae
- Taenia spp. egg
- Trichostrongylus sp

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
- ✔ Sensitivity 98.9%, slide-level specificity 98.1%*
- ✔ 5x more sensitive than manual examination*
- ✔ No daily cycle of fatigue, distraction, or confirmation bias
- ✔ Levels out sample and stain variations
- ✔ Excels at low-prevalence samples
- ✔ High volume, high reliability scanners produce 80x equivalent digital images



* These results are from a single study in a US based reference lab
These have not been examined by the FDA



Benefits

- ✔ Improved accuracy, efficiency and consistency of reads
- ✔ Quick elimination of negative slides
- ✔ Increased contribution margin per test
- ✔ Increased capacity for O&P testing
- ✔ More time available for analyzing positive cases
- ✔ Reduced technologist stress and fatigue
- ✔ Improved hiring, training, and retention of lab techs and technologists

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

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