Overview

Useful For
Detection and identification of parasitic protozoa and the eggs and larvae of parasitic helminths

Highlights
Includes concentrated wet preparation and permanent (trichrome) stained preparation as well as an exam for fecal leukocytes.

Testing Algorithm
The following algorithms are available in Special Instructions:

-Parasitic Investigation of Stool Specimens Algorithm

-Laboratory Testing for Infectious Causes of Diarrhea

Special Instructions

- **Parasitic Investigation of Stool Specimens Algorithm**
- **Laboratory Testing for Infectious Causes of Diarrhea**

Method Name
Microscopic

NY State Available
Yes

Specimen

Specimen Type
Fecal

Advisory Information
See OAPNS / Ova and Parasite, Microscopy, Varies for the submission of non-stool sources for ova and parasitic examination.

If specific organisms or disease states are suspected, see below:

If *Acanthamoeba* is suspected, order ACARP / *Acanthamoeba* species Molecular Detection, PCR, Ocular.

If *Cryptosporidium* is suspected, order CRYPS / *Cryptosporidium* Antigen, Feces.

If *Cyclospora* is suspected, order CYCL / *Cyclospora* Stain.

If free-living amebae are suspected, order FLARP / Free-Living Amebae Molecular Detection, PCR, Spinal Fluid, Fresh and Paraffin Tissue.

If *Giardia* is suspected, order GIAR / *Giardia* Antigen, Feces.

If microsporidia are suspected, order LCMSP / Microsporidia species, Molecular Detection, PCR.
Test Definition: OAP
Ova and Parasite, Microscopy, F

If pinworm is suspected, order PINW / Pinworm Exam, Perianal.

If scabies is suspected, order PARID / Parasite Identification.

If *Schistosoma* is suspected, order SHUR / *Schistosoma* Exam, Urine.

If *Trichomonas vaginalis* is suspected, order TVRNA / *Trichomonas vaginalis*, Nucleic Acid Amplification, Female Patients, Varies.

If worms or worm segments are submitted, order PARID / Parasite Identification.

**Additional Testing Requirements**

It is strongly recommended that multiple stool specimens be submitted for ova and parasite analysis. At least 3 specimens should be collected, 1 each day or on alternate days (over a maximum 10-day period).

Parasites are shed irregularly in stool and examination of a single specimen does not guarantee detection.

**Specimen Required**

**Patient Preparation:** Specimen collection should be delayed for 7 to 10 days after administration of barium, bismuth, kaolin, magnesia, castor oil or mineral oil, and 2 to 3 weeks after antibiotics have been given since these may interfere with identification of protozoa.

**Specimen Type:** Stool, duodenal aspirate, colonic washing

**Supplies:** ECOFIX Stool Transport Vial (Kit) (T219)

** Preferred:** ECOFIX preservative (T219)

**Acceptable:** 10% Buffered Formalin Stool Transport plus Polyvinyl Acetate (PVA) Stool Transport

**Specimen Volume:** Portion of stool; or entire collection of intestinal specimen

**Collection Instructions:**

1. Place specimen into preservative within 30 minutes of passage or collection.

2. Follow instructions on the container as follows:
   a. Mix the contents of the tube with the spoon, twist the cap tightly closed, and shake vigorously until the contents are well mixed. Refer to the fill line on the Ecofix vial for stool specimens.
   b. Do not fill above the line indicated on the container.
   c. Duodenal aspirates, small bowel aspirates, or colonic washings should be placed in Ecofix in a ratio of 1:1

**Additional Information:** Stool placed in 10% buffered formalin can be accepted if accompanied by a PVA-preserved specimen; 10% buffered formalin-preserved specimens submitted without an accompanying PVA-preserved specimen will be canceled.

**Forms**

If not ordering electronically, complete, print, and send 1 of the following forms with the specimen:
Test Definition: OAP
Ova and Parasite, Microscopy, F

- **General Request** (T239)
- **Microbiology Test Request** (T244)
- **Gastroenterology and Hepatology Client Test Request** (T728)

### Specimen Minimum Volume

5 mL

### Reject Due To

All specimens will be evaluated by Mayo Clinic Laboratories for test suitability.

### Specimen Stability Information

<table>
<thead>
<tr>
<th>Specimen Type</th>
<th>Temperature</th>
<th>Time</th>
<th>Special Container</th>
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<tbody>
<tr>
<td>Fecal</td>
<td>Ambient (preferred)</td>
<td>21 days</td>
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<tr>
<td></td>
<td>Refrigerated</td>
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### Clinical and Interpretive

#### Clinical Information

A variety of different parasites may be found in stool specimens, duodenal aspirates, and other intestinal specimens. These parasites may include protozoa (microscopic unicellular eukaryotes) and helminths (aka worms). Infection is often asymptomatic, but symptoms range from diarrhea and malnutrition, intestinal obstruction, and rarely, death.

The most common intestinal reported parasites in stool specimens are *Giardia intestinalis* (aka *Giardia duodenalis*, *Giardia lamblia*) and *Cryptosporidium* species. Both parasites may cause watery diarrhea and are endemic in the United States. The best tests for these 2 common parasites are parasite-specific fecal antigen tests (GIAR / Giardia Antigen, Feces and CRYPS / Cryptosporidium Antigen, Feces).

Other parasites are less commonly seen in the United States, and the stool parasitic exam is the appropriate test for their detection. See [Parasitic Investigation of Stool Specimens Algorithm](#) in Special Instructions for determining which test should be ordered based on the patient's exposure history and risk factors. If evaluating a patient for diarrhea, see [Laboratory Testing for Infectious Causes of Diarrhea Algorithm](#).

#### Reference Values

**Negative**

If positive, organism identified

#### Interpretation

A positive result indicates the presence of the parasite but does not necessarily indicate that it is the cause of any symptoms. Some strains of protozoa are nonpathogenic and some helminths cause little or no illness.

#### Cautions

If possible adult worms or proglottids are identified in stool or the patient's undergarments, they should be placed in 70% alcohol and submitted for PARID / Parasite Identification.
For optimal results, the specific test should be ordered for detection of *Giardia*, *Cryptosporidium*, microsporidia, *Cyclospora*, or pinworm. The OAP / Parasitic Examination is not the optimal method for detecting these parasites.

Parasitic examination of a minimum of 3 stool specimens is indicated for detecting most intestinal protozoa and helminths with maximum sensitivity.

Parasitic infections are uncommonly acquired in the hospital setting. This test is not usually useful in patients hospitalized for more than 3 days.

**Clinical Reference**


**Performance**

**Method Description**

A portion of the ECOFIX-preserved stool is concentrated and examined. A permanent trichrome-stained slide is prepared from the ECOFIX-preserved feces. (Package inserts: Mini Parasep Faecal Parasite Concentrator and Para-Pak ECOSTAIN Catalog No. 801400)

**PDF Report**

No

**Day(s) and Time(s) Test Performed**

Monday through Friday: 8 a.m.-7 p.m.

Saturday: 8 a.m.-4 p.m.

**Analytic Time**

2 days

**Maximum Laboratory Time**

4 days

**Specimen Retention Time**

7 days

**Performing Laboratory Location**

Rochester

**Fees and Codes**

**Fees**

- Authorized users can sign in to [Test Prices](#) for detailed fee information.
- Clients without access to Test Prices can contact Customer Service 24 hours a day, seven days a week.
- Prospective clients should contact their Regional Manager. For assistance, contact Customer Service.

**Test Classification**

This test has been cleared, approved or is exempt by the U.S. Food and Drug Administration and is used per manufacturer's instructions. Performance characteristics were verified by Mayo Clinic in a manner consistent with CLIA requirements.
Test Definition: OAP
Ova and Parasite, Microscopy, F

CPT Code Information
87177-Concentration (any type), for infectious agents
87209-Smear, primary source with interpretation; complex special stain (eg, trichrome, iron hematoxylin) for ova and parasites

LOINC® Information

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<th>Test Order Name</th>
<th>Order LOINC Value</th>
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<td>Ova and Parasite, Microscopy, F</td>
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