

Overview

Useful For

Gross identification of parasites (eg, worms) and arthropods (eg, ticks, bed bugs, lice, mites)

Detecting or eliminating the suspicion of parasitic infection by identifying suspect material passed in stool or found on the body

Supporting the diagnosis of delusional parasitosis

Identifying ticks, including *Ixodes* species (the vector for Lyme disease)

Reflex Tests

Test Id	Reporting Name	Available Separately	Always Performed
BUG	Arthropod Identification	No, (Bill Only)	No
WORMY	Parasite Identification	No, (Bill Only)	No

Testing Algorithm

When this test is ordered, 1 of the 2 reflex tests above will be performed and charged based on whether the object is an arthropod or worm. For parasite artifacts and nonhuman parasites, the reflex test performed will be based on whether the object most closely resembles a worm (eg, mucus strands, food material, fibers) or an arthropod (eg, ticks, mites, free-living insects).

For more information see [Parasitic Investigation of Stool Specimens Algorithm](#).

Special Instructions

- [Parasitic Investigation of Stool Specimens Algorithm](#)

Method Name

BUG: Arthropod and Artifact Identification

WORMY: Gross and Microscopic Examination

NY State Available

Yes

Specimen

Specimen Type

Varies

Necessary Information

1. [Specimen source and isolate description are required: morphology, tests performed, location of specimen, or other pertinent information.](#)
2. Indicate reason for request.

Specimen Required

**Specimen Type:** Parasitic worms, insects, or mites  
**Container/Tube:** Sterile container (10% formalin or 70% alcohol may be added if appropriate specimen type)  
**Specimen Volume:** Entire specimen  
**Collection Instructions:**

1. For scabies, submit skin scrapings on glass microscope slide. Cover with a clean slide and use a rubber band to hold the 2 slides together (do not tape). Place the slides in a clean, dry container for transport. If no slides are available at time of collection, the dry skin scraping can be submitted in a sterile container and will be placed on slide at time of examination. Skin scraping must be visible with the naked eye to be of a quantity sufficient for testing.
2. Submit whole worms and worm segments in 70% alcohol or formalin. Worms must be clean of stool to be suitable for examination.
3. Submit arthropods (ticks, lice, nits, bed bugs, etc) in a clean, dry container. Do not wrap in tape, gauze, or tissue that might obscure them during examination.

Forms

If not ordering electronically, complete, print, and send a [Gastroenterology and Hepatology Test Request](#) (T728) with the specimen.

Specimen Minimum Volume

See Specimen Required.

Reject Due To

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

Specimen Stability Information

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

Clinical & Interpretive

Clinical Information

Infectious diseases are spread and caused by a variety of macroscopic vectors. A wide array of macroscopic parasites (worms and ectoparasites) and parasite mimics or artifacts may be submitted for examination and identification. It is important to promptly and accurately identify these specimens so that the ordering physician can appropriately treat and counsel the patient.

Reference Values

A descriptive report is provided.

## Interpretation

A descriptive report is provided identifying the worm or arthropod. Worms and hard ticks are identified to the species level, when possible, while other parasitic arthropods are identified to the genus level.

Arthropods that do not cause human disease and parasite mimics resembling worms are reported as nonparasites or free-living insects.

## Cautions

This test identifies a tick's species, age, sex, and level of engorgement. It does not include analysis of ticks for the presence of *Borrelia burgdorferi*, the causative agent of Lyme disease. Testing ticks for potential pathogens such as *B burgdorferi* is not recommended since it does not indicate if the organism has been passed to the host during feeding. Instead, morphologic features of the submitted tick including the gender and degree of engorgement are more useful for predicting the risk of *B burgdorferi* transmission. Only female ticks transmit *B burgdorferi*, and they must be attached for 36 hours or more for transmission to occur. The latter is reflected by the degree of tick engorgement. Ticks that are not engorged with blood pose little risk for Lyme disease.

## Clinical Reference

Mathison BA, Pritt BS. Laboratory Identification of Arthropod Ectoparasites. Clin Microbiol Rev. 2014;27(1):48-67

## Performance

### Method Description

The submitted organism or material is examined macroscopically and microscopically, as appropriate for the specimen. Organisms are identified to the species level when possible.(Mathison BA, Pritt BS. Laboratory Identification of Arthropod Ectoparasites. Clin Microbiol Rev. 2014;27[1]:48-67)

### PDF Report

No

### Day(s) Performed

Monday through Friday

### Report Available

1 to 4 days

### Specimen Retention Time

1 week

### Performing Laboratory Location

Mayo Clinic Laboratories - Rochester Main Campus

## Fees & 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 account representative. For assistance, contact [Customer Service](#).

Test Classification

This test has been cleared, approved, or is exempt by the US 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.

CPT Code Information

87168-Arthropod (if appropriate)  
87169-Parasite (if appropriate)

LOINC® Information

Test ID	Test Order Name	Order LOINC® Value
PARID	Parasite Identification	20932-0

Result ID	Test Result Name	Result LOINC® Value
PARID	Parasite Identification	20932-0