



## GIARDIASIS AND CRYPTOSPORIDIOSIS

### What is Giardiasis and Cryptosporidiosis?

Giardiasis and cryptosporidiosis are diarrheal illnesses caused by microscopic parasites, *Giardia lamblia* and *Cryptosporidium parvum*. Once an animal or person has been infected with *Giardia* or *Cryptosporidium*, the parasite lives in the intestine and is passed in the stool. At certain stages of the life-cycle the parasites form a protective cyst stage which can survive outside the body and in the environment for long periods of time.

During the past two decades, giardiasis and cryptosporidiosis have become recognized as two of the most common causes of waterborne disease (found in both drinking and recreational water) in humans in the United States and around the world.

### What testing is available for Giardia and Cryptosporidium at ChildLab?

In addition to the standard ova and parasite exam, **ChildLab** uses a qualitative assay for detection of antigens GSA 65 and/or CSA. It is an EIA (enzyme immunoassay) antigen detection method for the simultaneous detection of both *Giardia* and *Cryptosporidium* in aqueous extracts of fecal specimens.

### Why use the EIA method for testing?

In the past, diagnosis of *Giardia* and *Cryptosporidium* infections have been done through a number of invasive and non-invasive techniques. Of the non-invasive techniques, the standard ova and parasite microscopic examination of stools has been the most common. However, this method relies on an experienced technologist and subsequent observation of intact organisms. Historically, this method has had low sensitivity due to the intermittent passage of organisms. Alternative diagnostic methods have been developed as a result of this limitation.

One important alternative has been the development of an antigen capture enzyme linked immunosorbent assay (ELISA) or EIA for use with stools. These tests have shown comparable sensitivity to microscopic examinations performed by skilled technologists, and do not require the observation of intact organisms.

### Limitations

Visibly bloody specimens have been reported and confirmed in our laboratory to cause borderline positive results. A single diagnostic assay should never be used as the only basis of forming a clinical conclusion. Results should be supported by correlation with the patients' presenting symptoms and the overall clinical picture.

### Reliable results are only as good as the specimen submitted.

Transfer fresh stool (<1hr old) to an Ova and Parasite kit formalin (pink) vial until liquid reaches the red line. Mix contents with collection spoon and keep at room temperature. Alternatively, the stool sample may be placed in Cary-Blair transport medium and refrigerated. Stable 7 days in formalin (pink) vial or Cary-Blair media.

### How can ChildLab help you?

**ChildLab** offers *Giardia* and *Cryptosporidium* testing 7 days a week with results reported in 1-4 days. For your convenience, **ChildLab** can provide stool collection containers with preservative by calling Client Services at (800)934-6575 or (614)722-5477.

**For More Information:** For questions regarding test availability, collection containers, and specimen requirements, please contact **ChildLab** Client Services at (614)722-5477 or (800)934-6575.