# OVA AND PARASITE EXAM (STOOL)

## I. GENERAL CONSIDERATIONS:

Intestinal parasitic infections are generally diagnosed by finding diagnostic stages in feces. Studies have shown that the eggs of most parasites are uniformly distributed in the fecal mass due to the mixing action of the colon. The distribution of protozoan forms is more variable. There may be fewer protozoan trophozoites in the first part of an evacuation than in the last because they have deteriorated while in the lower colon; **thus the need to submit more than one stool for optimal detection of protozoan parasites.**

## II. SPECIMEN COLLECTION:

(1) Because some organisms are shed in a variable pattern, it is advisable to examine multiple specimens before excluding parasites. The general recommendation is to collect two specimens at least one day apart. Continuing symptoms with two negative O&P exams may warrant a third sample.

(2) A number of substances may interfere with stool examination. Particulate materials such as barium, antacids, kaolin, and bismuth compounds interfere with morphologic examination, and oily materials such as mineral oil create small, refractile droplets that make examination difficult. If any of these substances have been used, specimens should not be submitted until the substances have been cleared (generally 5 days).

(3) Fecal specimens should be collected into wide-mouthed, water-tight containers. Usually patients can defecate directly into such containers. If the patient is producing formed specimens, stool may be collected by having the patient squat over waxed paper to defecate; stool may also be transferred from a recently soiled diaper. Urine should not be allowed to contaminate specimens, as it is harmful to some parasites. Specimens may be collected in a bed pan. **Toilet paper should not be included with the specimen. Stool should not be retrieved from toilet bowl water.**

(4) All specimens collected in the home or physician office setting, require placement into the Ova and Parasite Transport Media kit with fixative (available from the laboratory).

(5) The Ova and Parasite Transport Media kit is a single-vial system with one vial containing Total-fix (white cap) fixative. A portion of the specimen is added to the fixative vial in a ratio of approximately 3 parts fixative to 1 part specimen (add specimen up to the black fill line) and thoroughly mixed to ensure adequate fixation.

You may also use the two-vial system with one vial containing 10% buffered Formalin (pink) and the other vial containing polyvinyl alcohol (PVA) fixative (blue). A portion of the specimen is added to each fixative vial in a ratio of approximately 3 parts fixative to 1 part specimen (add specimen up to the red fill line) and thoroughly mixed to ensure adequate fixation.

The collection kits contain a complete description of how to collect the stool and use the fixatives. WARNING: Total-fix FIXATIVE, FORMALIN AND PVA FIXATIVES ARE POISONOUS AND SHOULD BE KEPT OUT OF THE REACH OF CHILDREN.

(6) Clinical information such as suspected diagnosis, travel history of the patient, and clinical findings should be included on the requisition. In addition, the time the specimen was passed should be noted. The consistency of the original specimen should also be noted.

(7) *Giardia* is detected as part of the routine O&P exam but not *Cryptosporidium*. Detection of *Cryptosporidium* is accomplished by ordering a *Giardia/Cryptosporidium* antigen test. Contact the Microbiology Lab for detection of unusual parasites including *Cyclospora, Isospora, Schistosoma,* and more.