FECAL FLOTATION

SUPPLIES:

- Sheather's sugar flotation solution (centrifugation)
- Sodium nitrate flotation solution (standing flotation)
- Pill bottle or container for sedimentation
- Slides and coverslips
- Fecal sample
- Centrifuge

RECOMMENDED PROTOCOL:

Procedure for Centrifugal Flotation (with free-swinging buckets):

1. Prepare a fecal emulsion using 1-5 grams of feces and 30 ml of flotation solution.
    - Minimum amount is 1 gram; 1 gram is equal to large green pea
2. Strain the emulsion through a tea strainer or cheesecloth into a 15-ml conical centrifuge tube.
    - Suspending a funnel over the tube facilitates filling the tube.
3. Fill the tube with flotation medium to create a rounded bubble (positive meniscus).
4. Place a coverslip on top of the tube.
5. Create a balance tube of same weight with another sample or water.
6. Place the tubes in the centrifuge buckets, making sure that they are counterbalanced with equal weight.
7. Centrifuge the tubes for 10 minutes at 400-600x g (about 1500 rpm).
8. Carefully remove the coverslips from the tubes by lifting straight up, and place them on a slide.
9. Examine the slide within 10 minutes.
    - Examine entire coverslip at 10X.
    - Use 40X to confirm identification by visualizing internal structures and measuring the organism.

Modification

1. If your centrifuge is **fixed-angle,** proceed as above but fill centrifuge tube to within an inch or so of the top, and do not add a coverslip for the final spin.
2. When final centrifugation step is complete, carefully set the tube upright in a test tube rack.
3. Use a pipette to gently run additional flotation solution down the side of the tube while disturbing the contents as little possible.
4. Create a positive meniscus and set a coverslip on top.
5. Let stand for 5 minutes only.
6. Remove the coverslip to a slide and examine as described in step 9.

Standing Fecal Flotation (if no centrifuge available):

1. Feces collected via a fecal loop (or equal amount) should be placed in the flotation container, and the sodium nitrate fecal flotation medium added to the container.
    - The fecal solution and the feces should be stirred together to allow thorough mixing of the sample.
2. Solution should be added until a rounded bubble (positive meniscus) is present on the top of the container.
3. A coverslip should then be placed over the top of the container.
4. The sample should be allowed to sit, undisturbed, for 15 minutes.
5. The coverslip should then be removed and placed on a slide.
6. The slide and coverslip should then be read on a microscope at the 10X setting.
    - The entire coverslip should be assessed for any parasites or parasite ova.
    - Use 40X to confirm identification by visualizing internal structures and measuring the organism.