Fecal Floatation Instructions

Introduction

Many veterinary customers are using centrifuges for fecal floatation. The ova recovery rate is much higher using the centrifuge method where a coverslip is placed directly onto the top of a tube while spinning. The ova, being lighter than the floatation solution, are forced upward onto the glass of the coverslip. After spinning, simply remove the coverslip and place directly onto your microscope slide.

Instructions

1. Choose the right floatation solution. **Sheather's Solution**, otherwise known as sugar water, is the **BEST** choice for several reasons: First, it has a specific gravity of 1.27, which is higher than other solutions such as zinc sulfate (Fecasol). A higher specific gravity means you will float more types of eggs, such as Taenia tape worm eggs and Physaloptera stomach worm eggs. Second, sugar water is much less corrosive on the components of the centrifuge, such as motor bearings, circuit boards, and speed sensors. Using **Sheather's Solution** will float more eggs and extend the life of the centrifuge.

   Note: While Sheather's Solution is recommended, other fecal solutions can be used.

2. It is important to use quality test tubes with a flat rim to ensure cover slips seat and seal properly and do not fall off. Inspect your test tube rim with your finger to determine if there are any irregular bumps or sharp edges, which will not allow the cover slip to seat and seal properly. Polypropylene tubes with a wide flat rim work best and are recommened. Glass tubes are also acceptable, but make sure to seat the cover slip well. Disposable polystyrene tubes may also be used, but the narrow and irregular top rim may cause cover slips to fall off more frequently.

3. Prepare the test tubes in a test tube rack, with a paper towel underneath – NOT inside the centrifuge. Filling the tubes inside the centrifuge will cause excessive spilling which will make the centrifuge off balance and more difficult to clean.

4. Fill the sample tube with prepared fecal solution to the top with a slight bulging meniscus. Then place a cover slip on top of the tube, and tap it down with your finger to seal it onto the rim. ***It is acceptable to have a small bubble beneath the cover slip, but make sure that mostly liquid is contacting the cover slip.***

BULGING MENISCUS TAP DOWN COVERSLIP



5. Prepare a balance tube, use fecal floatation solution for proper balancing. DO NOT use water, because water weighs less than fecal solution. The balance tube can be capped rather than using another cover slip, which will reduce the chances of losing the cover slip.

6 Carefully transfer the tubes into the centrifuge.

7 Make sure that the coverslip is turned so that the edge is parallel to the edge of the rotor. If the corner of the coverslip is pointing towards the center, then it will contact the flat metal portion of the rotor when spinning horizontal and will fall off.

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8 Give the cover slip one final tap down before running the centrifuge.

9 Spin the centrifuge at 1300 rpm (~280 g-force) for 6 minutes. Once the unit stops, the cover slip can be placed onto a microscope slide for microscopic evaluation. Some studies have shown that allowing the cover slip to sit on the test tube for an additional 10 minutes after centrifugation will ensure greater ova recovery.

NOTE:

• Fecal Floatation solution is much heavier than water, and must be used for balancing. Using a water tube will cause the centrifuge to spin off- balance, causing coverslips to break or damage the centrifuge.

• Clean and disinfect the tube sleeves daily. If fecal solution is allowed to build up in the bottom of the tube sleeves, the centrifuge will become out of balance, causing it to shake and cover slips to fall off more frequently. Double check the bottom of the tube sleeve to ensure that solution has not hardened inside the bottom of the sleeve. If balance is still a problem, weigh each sleeve to ensure they are all of similar weight.

Contact LW Scientific at 800-726-7345 if you continue to have issues with cover slips falling off or with an out-of-balance centrifuge.

*FOR MX5 Centrifuge Users Only

If you purchased the MX5 with an 8-place swing out rotor, be sure to use the 4-place configuration. This will ensure cover slips have the proper force to stay on the test tube.

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