

Lab #8

Fecal Sedimentation

Tapeworm Segment Squash

What you should accomplish during Lab #8

1. After an introduction, students will prepare & examine a **Fecal Sedimentation**.
2. After an introduction, students will prepare & examine a **Tapeworm Segment Squash**.
3. After an introduction, students will become familiar with select Trematode eggs, Tapeworm eggs, and Tapeworm proglottids

Technique

Fecal Sedimentation

- 1) Mix about one gm of feces with 12 - 14 ml of saline solution.
- 2) Strain fecal solution into a plastic beaker.
- 3) Pour the strained solution into a 15 ml centrifuge tube and allow to stand 20 minutes.
- 4) After 20 minutes, use a pipette to aspirate and discard all but the bottom 0.5 to 1ml of solution from the centrifuge tube
- 5) Mix this bottom aliquot.
- 6) Place a drop of the sediment on a slide, cover with a cover slip, and examine with 4X & 10X.
- 7) Scan for operculated trematode ova

Technique

Dried tapeworm proglottid

- 1) To distinguish between a *Taenia sp* and a *Dipylidium caninum* infection in a dog or cat.
- 2) Place the dried proglottid in a petri dish of water
- 3) Allow proglottid to rehydrate in the water for 20 to 30 minutes.
- 4) Squash a thoroughly softened (rehydrated) proglottid between two microscope slides.
- 5) With both slides still together, examine under the compound microscope.
- 6) Identify the tapeworm proglottid from the ova released.

OR

- 1) In the petri dish, use dissecting needles to open or macerate the softened proglottid
- 2) Transfer debris with a pipette to a microscope slide, cover with cover glass & examine for tapeworm ova.
- 3) Identify the tapeworm proglottid from the ova released.

Exercises

1. **Fluke Diagnostics** --- Perform a Fecal Centrifugation on the provided Cow Feces.
2. **Tapeworm Diagnostics** --- Perform a Tapeworm Segment Squash on the provided Tapeworm Proglottid.
3. Examine specimens of common fluke and tapeworm eggs presented on the overhead monitors.

Ruminant: Fluke - *Fasciola hepatica*
Tapeworm -- *Moniezia*

Equine: Tapeworm - *Anoplocephala sp.*

Canine: Fluke - *Paragonimus kellicotti, Heterobilharzia americana*
Tapeworm - *Taenia pisiformis, Dipylidium caninum, Spirometra sp.*

Feline: Fluke - *Paragonimus kellicotti*
Tapeworm - *Taenia taeniaformis, Dipylidium caninum, Spirometra sp.*

Utilize this lab and the Parasitology website to learn these diagnostic stages as one will be responsible for identifying these on the Lab Practicals.