

TECHNICAL BULLETIN

Evaluating Intestinal Capillaria Infection Using a Worm Screen



1. Humanely euthanize 3-5 birds from the flock¹. These can be the same birds selected for gross coccidiosis lesion scoring, or alternatively birds that are no longer in production or mis-sexed birds.

2. Remove the gastro-intestinal tract of the birds carefully by making two cuts; one at the esophagus immediately cranial to the proventriculus and the other in the distal rectum (at the vent). Remove the entire tract, taking care not to tear the intestines or rupture the gall bladder.



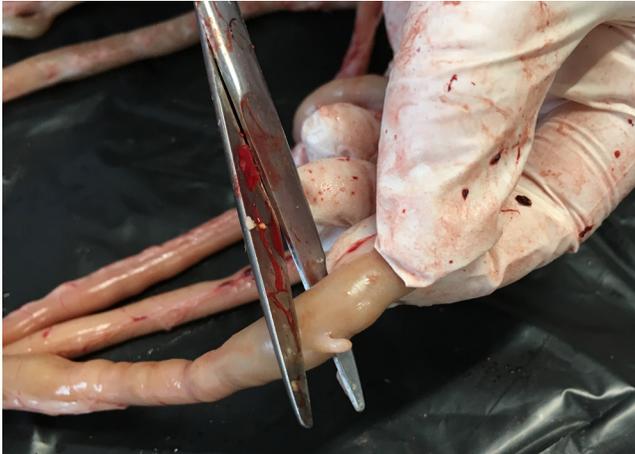
3. Open and examine the proventriculus and ventriculus for any evidence of hemorrhage, erosions or other abnormalities prior to removing these from the intestinal tract. Examine the outside or serosal surface of the duodenum, jejunum and ileum for any evidence of coccidiosis or other pathology.



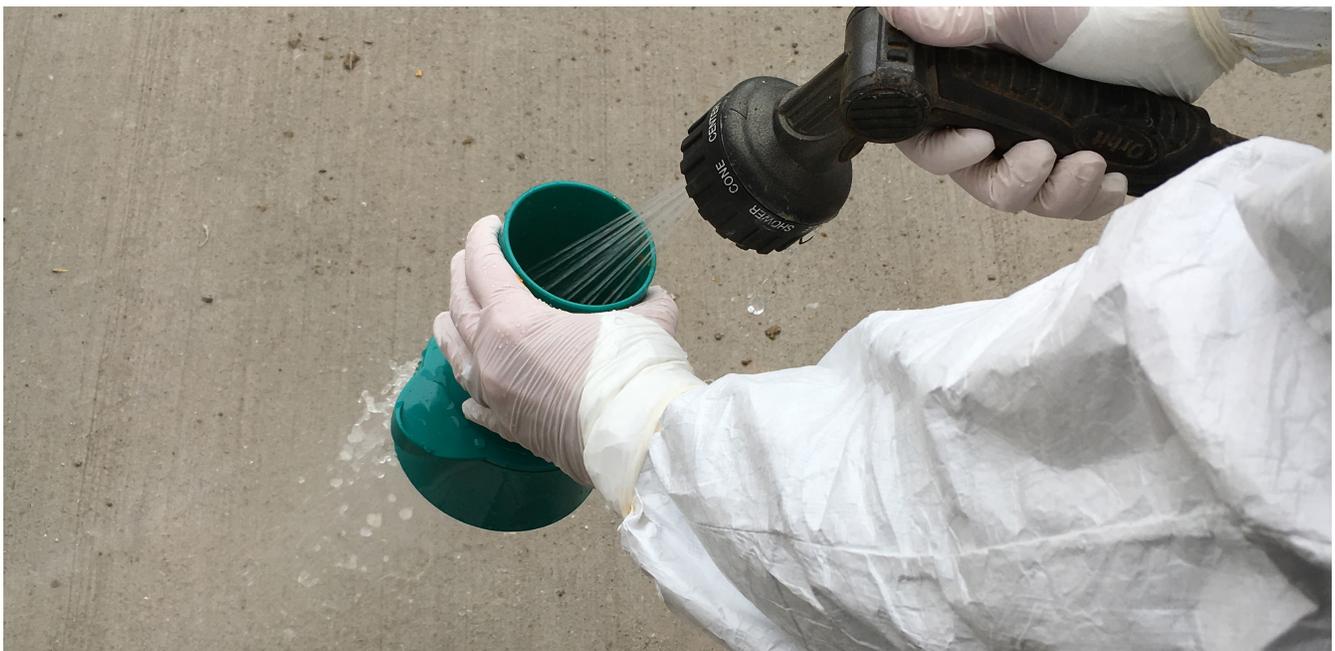
4. Carefully open the intestinal tract lengthwise from the duodenum to the rectum to allow for examination of the luminal surface of the intestine. Open the cecal pouches in a similar fashion, paying special attention to the tips, where cecal worms (*Heterakis gallinarum*) can often be found. Record the presence of any other intestinal worms (roundworms or tapeworms).



5. Examine, then gently remove the contents of the tract and score the luminal surface of intestines and cecal pouches for coccidiosis². Cut the intestinal tract at Meckel's diverticulum and discard the distal portion of the tract. Scrape the intestinal mucosa, using the blade of your knife, from the duodenum to Meckel's diverticulum. Place the mucosal sample into the small diameter end of the worm screen. Scrape this same surface in the opposite direction and again place the mucosal scrapings into the smaller end of the worm screen.



6. Using a garden hose or other high-pressure water source, spray directly into the small end of the worm screen to remove any mucous, intestinal content (feed) or other debris. Rinse well, as the worms will be retained by the screen.



7. Turn the screen over into a glass jar with an opening large enough to accommodate the small end of the worm screen. Using the same garden hose or high-pressure spray, spray through the large end of the screen until the jar is filled with water.



8. Examine the jar for small white thread-like *Capillaria* worms.



References

- ¹ Euthanasia should always be conducted according to client company policy and/or the local official Code of Practice for poultry euthanasia. In the absence of company policies or a local official Code of Practice, consult the national or regional veterinary medical association for further guidance.
- ² For additional details on gross and microscopic evaluation for coccidiosis, please consult your Merck Animal Health Technical Team.