

# PARA-PAK<sup>®</sup> STOOL CONCENTRATION KIT CON-TRATE<sup>®</sup> SYSTEM

<u>Cat. no. 960050</u>	Para-Pak <sup>®</sup> Stool Concentration Kit, CON-Trate <sup>®</sup> System	50 tests/kit
Cat. no. 960200	Para-Pak <sup>®</sup> Stool Concentration Kit, CON-Trate <sup>®</sup> System	200 tests/kit

#### **SUMMARY**

Diagnosis of intestinal parasitic disease is confirmed by the recovery and identification of helminth eggs and larvae or protozoan trophozoites and cysts from feces. Concentration procedures facilitate this process and are of importance when small numbers of protozoa are present in large volumes of feces.

#### PROCEDURE

Any specimen preserved in 10% formalin, sodium acetic acid formalin (SAF), polyvinyl alcohol (PVA) or merthiolate iodine formalin (MIF) may be used.

1. The specimen must be well mixed in the preservative and allowed to stand for at least 30 minutes to ensure adequate fixation.

2. Add 4 drops of CON-Trate <sup>®</sup> Reagent A to the specimen if the specimen is highly mucoid.

3. Cap and mix the contents thoroughly by shaking.

4. Insert one of the CON-Trate <sup>®</sup> filtering devices into the top of one of the disposal centrifuge tubes provided.

5. Pour fecal suspension through the filtering device into the centrifuge tube. Usually 3ml in the centrifuge tube is sufficient unless the fecal suspension is thin.

6. Discard filtering device. Add 10ml saline and centrifuge for two minutes at 1800 to 2000 rpm. Decant the supernatant fluids, retaining the sediment.

7. Suspend the sediment in 9ml of 10% formalin.

8. Add approximately 3ml of CON-Trate <sup>®</sup> Reagent B, cap the tube and shake for 30 seconds. Invert the tube while shaking. CAUTION: Pressure may build up within the tube during shaking.

9. Centrifuge the tube for 2 minutes at 1800 to 2000rpm. Examination of the tube after centrifugation should reveal four distinct layers from the top down: a layer consisting of Reagent B a "plug" of fecal debris a discolored aqueous layer a sediment layer, containing the parasites. The final sediment remaining should be approximately 0.25ml.

10. Hold the tube in a vertical position. Free the plug of debris by ringing with a wooden applicator stick. Decant the upper layers, leaving the sediment. DO NOT TURN THE TUBE UPRIGHT UNTIL THE SIDES OF THE TUBE HAVE BEEN CLEANED WITH COTTON-TIPPED SWABS.

11. Transfer a portion of the sediment to a clean glass microscope slide and prepare the mount of choice.

# **INTERPRETATION OF RESULTS**

Examine microscopically. Consult an appropriate reference for proper preparation and examination.

#### LIMITATIONS

1. Adequate sample must be present in the fixative. In a fecal suspension, with a ratio of stool to preserve 1:3, 3.0ml of filtrate will provide the optimum sediment volume. However in less dense specimens (ie: watery stools) as much as 10.0-12.0ml of filtrate may be necessary to obtain the 0.25ml of final sediment.

2. Fecal suspension should be allowed to flow freely through the filter device. Forcing the material through the filter may result in hard, gritty substances which can make coverslipping difficult.

3. To facilitate reading of drier specimen sediments, a drop of saline should be added to the sediment on the slide and the coverslip should be floated on top.

### MATERIALS REQUIRED BUT NOT PROVIDED

Microscope slides and coverslips, 10% formalin, physiological saline, cotton-tipped applicator sticks, centrifuge, microscope, pipets.

## QUALITY CONTROL

The filtration components are stable for 2 years from date of manufacture when stored at room temperature.

The centrifuge tubes should be free from any cracks. The mesh screen in the filtration funnels should be uniform in appearance.

The MucoPenX should be free of any bacterial or fungal contamination.

# PACKAGING

Filtering devices Disposable centrifuge tubes with caps Reagent A (MucoPenX - 15ml bottle) Reagent B (Ethyl acetate - 225ml)

#### REFERENCES

Para-Pak <sup>®</sup> Stool Concentration Kit, CON-Trate <sup>®</sup> System Package Insert. 1990. Meridian Diagnostics, Inc., Cincinnati, Ohio.

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