

Comparison of Fecal Examination Techniques*

TECHNIQUE	ADVANTAGES	DISADVANTAGES
<u>Direct Smear</u>	<ul style="list-style-type: none"> • Quick to prepare. • No distortion of parasites if isotonic saline is used as diluent. • Only way to see live trophozoites. (Isotonic saline must be used as the diluent.) 	<ul style="list-style-type: none"> • Can miss parasite if concentration is too low or if too much debris or fat is present. • Sand, seeds, or other fecal debris can make placement of coverslip onto slide difficult. • May take a long time to examine.
<u>Saturated Sucrose or Salt Flotation</u>	<ul style="list-style-type: none"> • Procedure floats the most common helminth ova and coccidian oocyst. • Solutions are inexpensive. • There is little debris to obscure the view of the parasite. 	<ul style="list-style-type: none"> • Procedure will not float trematode ova and <i>Diphylobothrium latum</i> tapeworm ova. • Distorts <i>Giardia</i> cysts. • Time consuming if centrifugation not performed. • Unsuitable for fatty stool samples.
<u>Sodium Nitrate (Fecasol) Flotation</u>	<ul style="list-style-type: none"> • Procedure floats the most common helminth ova and coccidian oocyst. • There is little debris to obscure the view of the parasite. • Solution commercially available. 	<ul style="list-style-type: none"> • Procedure will not float trematode ova and <i>Diphylobothrium latum</i> tapeworm ova. • Distorts <i>Giardia</i> cysts. • Unsuitable for fatty stool samples. • The NaNO₃ solution is expensive.
<u>Zinc Sulfate Flotation</u>	<ul style="list-style-type: none"> • Procedure floats most helminth eggs. • Best floatation method for protozoan cysts, especially <i>Giardia</i>. • There is little debris to obscure view of parasites. 	<ul style="list-style-type: none"> • Procedure will not float some trematode ova, and <i>Diphylobothrium latum</i> tapeworm ova. • Unsuitable for fatty stool samples. • ZnSO₄ is expensive and a hydrometer should be used to make up the solution.
<u>Ethyl Acetate Sedimentation</u>	<ul style="list-style-type: none"> • Procedure recovers ALL types of helminth ova, larvae, and most protozoan cysts. • It is the best technique for formalin-fixed samples and for stools with high fat content. 	<ul style="list-style-type: none"> • It is more difficult to perform than other techniques. • Ethyl acetate is flammable and expensive. • There is more debris in preparation preps than in flotation preps - therefore it will take longer to read.

*Adapted from <http://cal.vet.upenn.edu/dxendopar/techniques/comfecal.html>