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Section: Parasitology Manual	Subject Title: Laboratory Procedures for Stool Examination	
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Agar Plate Test for *Strongyloides*

PRINCIPLE

This method is considered to be the most sensitive for the detection of *Strongyloides* since a few larvae can be detected in a relatively large sample. The principle is that larvae will migrate out of the stool sample and will be covered by bacteria. When the larvae migrates across the agar it will leave a bacteria trail that will become observable with time. *Strongyloides* larvae come in two forms, a rhabditiform and an infective filariform, therefore great care must be taken when testing for the presence of *Strongyloides*.

SPECIMEN

Fresh stool sample—reject if it has been refrigerated or if the time limit of 12 hours has been exceeded.

SAFETY

- Assume that the sample contains filariform larvae and wear gloves and take measures to prevent the larvae from migrating out of the dish.
- Warn co-workers about the nature of your work.

PROCEDURE

This is considered to be a non-routine procedure therefore it should only be performed by experienced personnel.

Prepare agar plates (9 ml of 1.5% agar, 0.5% meat extract, 1.0% peptone, 0.5% NaCl per 9 cm x 2.5 cm plate) and store in a cold room until required.

1. Place 2-3 g of unpreserved faeces in the center of the agar plate and then seal the plate by placing tape around the circumference of the plate. (**Very important! We don't want any "escapees"!**)
2. Let the sample incubate for 2-3 day and then examine the agar surface for larva and the "bacteria trails" that have resulted from migrating larva.

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3. Speciation can be confirmed by obtaining a migrating larva and examining it under a microscope.

QUALITY CONTROL

- Do not use old or suspicious agar plates.
- Ensure that the microscope has been calibrated in the last year or after any changes in the optics and that the results of the calibration are displayed on the microscope base.

REPORT

- Bacteria trails on the agar indicate the presence of *Strongyloides*.