# Modified McMaster Egg Count Procedure

## Principle

Many eggs and larvae will float in certain sugar/salt floatation solutions because they have a lower specific gravity than the solutions they are floating in. This procedure employs a special counting chamber that allows you to count the number of eggs present in .300 ml of available solution in the chambers.

## Materials and Equipment

1) Tongue depressors
2) Plastic cups
3) Cheesecloth (5 X 5 double layer)
4) Sugar/Salt flotation solution (1125 g sugar, 748 g salt, 2 L distilled water)
5) Pipettes
6) McMaster egg counting chamber slides
7) Microscope (10X objective)
8) Scale
9) Counter

## Procedure

1) Weigh out 4 g fecal material (approximately 1 tbsp).
2) To one plastic cup, add weighed sample and 26 ml flotation solution.
3) Thoroughly break up fecal sample, mix, and strain through cheesecloth.
4) Immediately fill both sides of the McMasters chamber.
    a. Fill pipette from the surface since the theory is the eggs will float to the top.
    b. It may also help to get a better sample size by emptying anything that is left in the pipette after the 1st chamber is filled, waiting a few seconds (approximately 30), and then refilling the pipette again from the surface to fill the second side of the chamber.
5) Let sample sit in the chamber for 2-5 minutes to allow eggs to float to the surface of the chamber.
6) Using the 10X objective (lowest objective on microscope) count the number of eggs in the sample going up and down the 6 lanes inscribed on each side of the counting chamber.
    a. It will help to focus on and begin counting at the corner square of your choice.
7) Multiply the number of eggs counted by 25.

## Calculation Explanation

1) 4 g fecal material + 26 ml sugar/salt solution = 30 ml
2) Amount of sample examined in McMaster slide = .300 ml (0.150 ml/slide)
3) 30 (total volume) / .300 (chamber) = 100 / 4 (g fecal material)

= 25 (multiplier)

*Source: Dr. Dahlia O'Brien, Delaware State University*