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### Important points for the examination of faecal specimens for parasites

- Approximately 1 gram or a pea sized amount of faeces should be concentrated and the **whole** of the deposit examined. This corresponds to good practice with clinical samples. In UKNEQAS samples, the whole of the deposit should be concentrated as this corresponds to 1g of faeces.
- It is important to sieve the sample after adding it to 10% formalin as failure to do so may result in excess deposit, thus obscuring ova and cysts. The pore size we recommend is 425 microns. Pore sizes larger than this result in too much debris thus resulting in excess deposit. This obscures ova and cysts.
- 10% Formalin in water is more effective than formalin in saline since the saline solution can affect the specific gravity thus cysts in particular may remain in solution.
- It is important to add a surfactant if using ethyl acetate. At the Hospital for Tropical Diseases, we use Triton X at a concentration of 0.1% i.e. add 1 ml of Triton X to 1 litre of formalin.
- It is important to vortex the sample for at least 15 seconds after the addition of ether or ethyl acetate, as failure to do so may result in excess deposit, thus obscuring ova and cysts.
- Adequate centrifugal force must be used because if this is below the required value, there may be insufficient gravitational force to sediment the ova and cysts. The centrifugal time is also critical, since the ova and cysts may remain in suspension if the sample is not centrifuged for the minimum required time. It is recommended that the sample be centrifuged at 1200g or 3000rpm for 3 minutes

In order to calculate the required RPM for any centrifuge, the following formula is used:

$$\text{RPM} = \sqrt{\frac{g}{1.2r}} \times 1000$$

**RPM** rotor speed in revolutions per minute

**g** centrifugal force

**r** radius, horizontal distance between sedimentation cone tip and spindle centre measured in millimeters.