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Egg Collection for *Nasonia* (Parasitoid Wasp)

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INTRODUCTION

This protocol describes methods to count and/or collect *Nasonia* eggs. Fly hosts are placed in a foam plug such that only one oviposition site is available to the female wasp.

MATERIALS

REAGENTS

12mm Culture vials
Sarcophaga hosts
15mm foam plugs
#12 syringe needles

PROCEDURE

1. Heat dissecting needle using a laboratory burner. Use this to burn holes in the end of foam plugs. Do not insert the needle more than 75% of the way through the plug. Plugs can be reused.
2. Collect females of strain of interest. To maximize egg production, give females hosts for 2–3 days to host-feed. Virgin females will produce all-male offspring, while mated females will produce about 90% female offspring.
3. Transfer emerged females to 12mm culture vials by dumping onto lab bench and placing inverted tubes over females. Allow females to climb up into the vials.
4. Check host quality. Roll hosts on flat surface to check for dessication. Discard any which do not roll evenly. Also discard any very dark or misshapen hosts.
5. Place host pupae anal-end first into host plug and insert into the culture vial, allowing only the head-end of the host to be accessible to the wasp. If the plug is loose around the pupa, do not use that plug.
6. Allow females to oviposit for 2 hours, and then remove females.
7. Crack open host at the base of the head segment using thumbnail or dissecting needle. Practice so that you can do this without breaking the host.
8. Count eggs or collect eggs using a fine brush or sterilized syringe needle. Eggs will be arranged in a circular pattern around the sting site. The sting site can be identified as a brown/black dot, possibly with a protruding feeding tube.

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