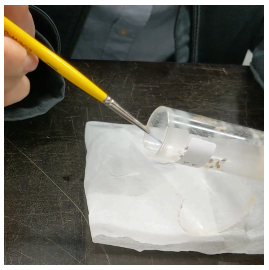
Nov 16, 2020

Video protocol for sorting Drosophila pupae



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Protocol status: Working
We use this protocol and it's working

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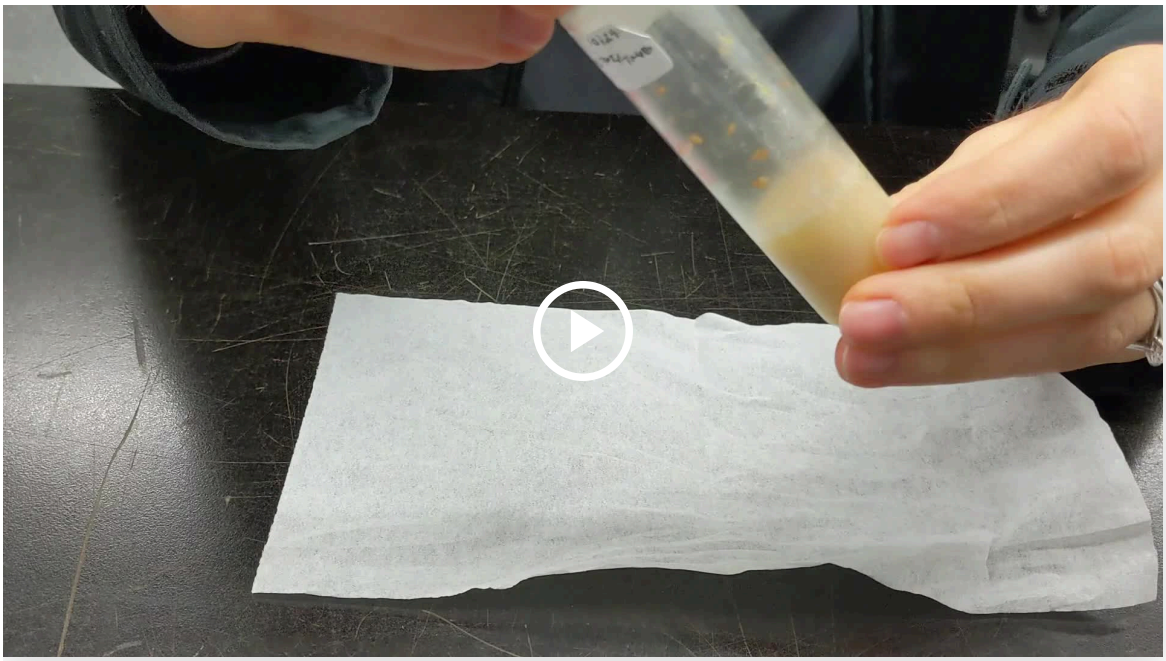
Abstract

This is my favorite way to sort pupae.

Credit to Tom Alisch & Dave Zucker (@FlySorter) for discovering a new use for transparencies!!

1 Video summary of the method:



2 Cut out a small piece of a projector sheet (e.g. Hygloss Overhead Projector Sheets, https://www.amazon.com/Hygloss-75910-Products-Transparency-Projectors/dp/B077762QK5/ref=sr_1_8?dchild=1&keywords=transparency&qid=1605473049&sr=8-8).

You'll want to make sure the piece is long enough to completely cover the inside of the vial and not so wide as to reach beyond the surface of the food. Measure diameter of the vial mouth to determine a suitable length (d*pi + ~ 1 cm) and space between food and cap to determine width.

3 Roll up the projector sheet and place into a vial any time before flies reach 3rd instar.

4 Pull out the transparency after pupation.

5 Sort pupae using a paintbrush, using water to dissolve the glue holding pupae to the projector sheet. Placing a Kimwipe under the projector sheet will help you maintain a clean workspace and prevent inter-vial contamination.

6 Pupae can be directly transferred to a new vial with food or placed on a new piece of projector sheet which can then be rolled up and placed into a vial.

7 Between genotypes, check paintbrush bristles for any adhered larvae or pupae and remove before proceeding. Rinse paintbrush thoroughly with water and 70% ethanol to decontaminate.