

Maintaining fly stocks

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Abstract

This short protocol describes how to maintain your fly stocks as single generation, age-matched populations. The method described encourages a health fly population, firstly, as individuals mate and oviposit during an optimal age when females are highly fecund and secondly, because the reduced crossing over of generations reduces the risk of horizontal disease transmission.

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Protocol

Step 1.

Maintain fly stocks in 23ml vials (Sarstedt, 58.490) containing 7ml of Lewis medium (Lewis, 2014). Stocks should be kept at $25 \pm 1^\circ\text{C}$ on a 12h:12h light:dark cycle with 60% humidity.

Step 2.

Every 14 days, transfer 20-30 adults to a new food vial, with instant, dry yeast added to the food surface to encourage egg laying. Leave flies for 2-3 days. After this time eggs should be visible on food surface and adults can be removed and killed.

Step 3.

Eggs are left to develop. Adult flies will start to eclose from pupae on day 11 and individuals will continue to eclose over days 12-14.