The mites entered among samples of wild flies collected at several trappings in Mexico City.
In order to eliminate the mites, the infested cultures were treated in the following manner:
all contaminated bottles and instruments were heated in a furnace before washing. The instru-
m ents used to manipulate flies, as well as the microscope surface, the exterior of bottles,
and the table surfaces were repeatedly washed with a solution of benzyl-benzoate (20%) in 90°
ethanol. Before starting new cultures all flies were examined under the microscope, and
apparently mite-free adults selected for later use. As it is difficult to avoid contamina-
ting the new medium, the adults were allowed to lay eggs on it only during a 24 hour period.
When several small hypopus nymphs either from contaminated flies or from other cultures,
were found in the new medium, its surface had to be covered with a solution of benzyl-benzoate
(20%) in 90° ethanol. This treatment kills the nymphs without any apparent toxic effect on
the Drosophila larvae, which then develop into the adult stage unimpeded by predatory mites.
The newly emerged flies were transferred to new cultures every day in order to avoid the
attachment of any mites which survived treatment.
In the heavily infested cultures all of the flies died; and a crowding of mite nymphs was
found among the Drosophila larvae. In this case the application of a second treatment was
necessary, thoroughly washing the larvae by immersion in a solution of benzyl-benzoate (20%)
in ethanol. Following the 2-4 minute immersion in the benzyl-benzoate solution, the larvae
were washed with Ringers solution and then transferred to fresh vials. The pest was control-
led effectively after three weeks, adhering to the above steps.

Frankham, R., Macquarie University, Sydney, Australia. Instant mashed potato as a fly food.
The instant Drosophila media available commer-
cially are expensive and must be imported if one
lives in the antipodes. They are also unlikely
to be available locally to people on field-col-
lecting trips. Instant mashed potato added to
water (in 1:2 proportions by volume) with a pinch of granulated live yeast on top provides a
satisfactory instant media for culturing Drosophila. It is improved if powdered agar (10g to
160g instant mashed potato) and Nipagin (1.27g to the above) are added. Killed yeast may
also be added to this powder. We have found differences among brands of instant mashed potato
in their suitability for culturing Drosophila. This media has been used successfully by ex-
ternal students carrying out Drosophila experiments at home.

Merriam, J.R. and B. Howard, University of California, Los Angeles. Mite control
with caffeine in Drosophila food.
During a recent set of experiments on behavioral
responses to drugs we noticed that the flasks
with caffeine were less susceptible to periodic
mite infestations. We tested this conclusion
more directly by comparing inoculations of
flies from an old mite infested culture into vials made up with and without caffeine. The
vials were placed in a pan containing mineral oil to prevent the mites from spreading. Visi-
able mite appearance was delayed by about two weeks in the vials containing caffeine although
there was no change evident in the times of larval, pupal or adult progeny appearance.
We now routinely add caffeine to about 0.02% of the final concentration of food. This
comes to 3.4 g per 300 half pint bottle batch (17 l, H₂O). The caffeine is added after the
food has cooked (along with the propionic acid mix) and is thoroughly mixed in. A neutral
red food dye is used as marker. Anhydrous caffeine is purchased from the Sigma Co. (10 for
500 gm).
We feel that this procedure has so far helped keep our lab relatively free of mites. How-
ever, caution should be exercised in determinin g the amount of caffeine added by other labs.
Whereas a concentration of 0.02% does not visibly affect the flies in our hands, we found that
a concentration of 0.05% in vials kills about half the adults within 24 hours. It is interest-
ing that 0.05% is probably about the same concentration as the caffeine in a "strong" cup of
coffee. Yanders and Seaton (1962) did not find caffeine in these concentrations to be muta-
genic in flies and we have no cause to disagree with their conclusion.