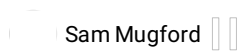


Ambient sample storage system of field-collected insect samples for genomics

Roland Wouters¹, Sam Mugford¹, Saskia Hogenhout¹

¹Crop Genetics, John Innes Centre, Norwich, UK.

1 Works for me dx.doi.org/10.17504/protocols.io.bgxjxme

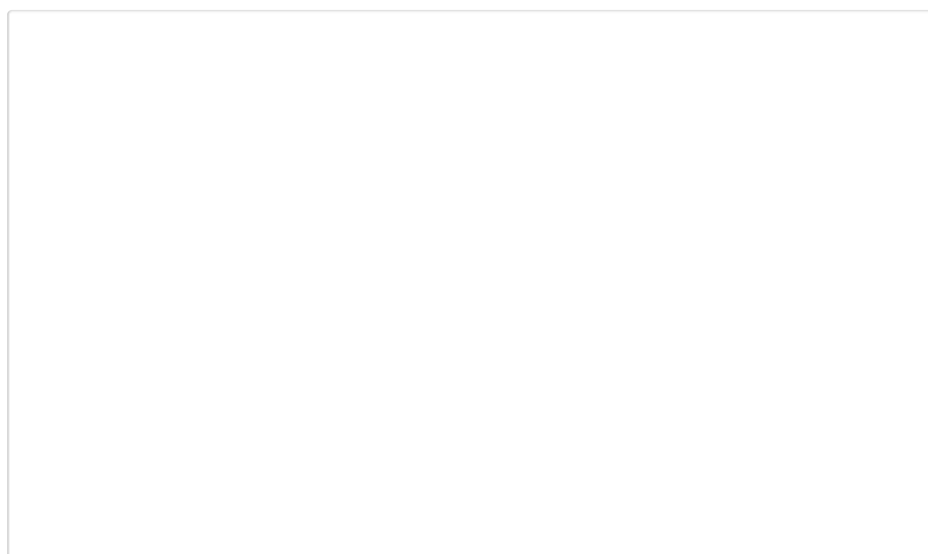


Sam Mugford

ABSTRACT

Population genomics studies require the purification of high-quality DNA from field collected samples for subsequent analysis. Often it is impossible or impractical to snap freeze collected samples. Alternate storage methods have been used, such as preserving specimens in ethanol or DMSO. However, both are detrimental to the quality of the DNA recovered. We have found that dehydrating field-collected insect samples using silica gel is a simple, cheap and effective alternative. We can recover high quality DNA suitable for short-read sequencing approaches from samples that have been stored with silica gel for up to 8 weeks stored at ambient temperatures-suitable for the most remote field studies.

Here we present a method for the construction of low-cost sample collection and storage tubes from commonly available laboratory consumables.



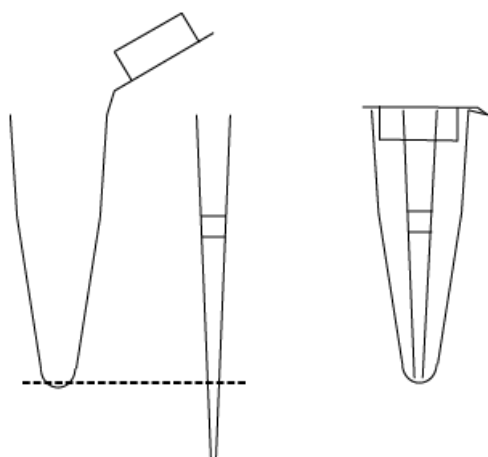
EXTERNAL LINK

<https://youtu.be/L2nIGcUvW14>

MATERIALS TEXT

1.5 ml Eppendorf tubes
200ul filter pipette tips
Silica gel granulate (0.2-1 mm)

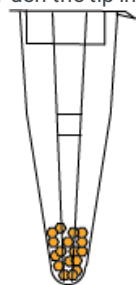
- 1 Measure the pipette tip against the Eppendorf tube, and cut off the tip of the pipette tip. The remaining length of the pipette tip should fit inside the Eppendorf tube, with the wide end of the tube fitting tightly against the inside of the tube.



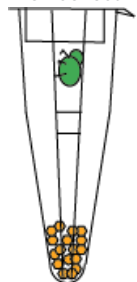
- 2 With the tip removed from the tube, add approximately 100ul of silica gel to the tube.



- 3 Push the tip into the tube through the silica gel. Close the tube.



- 4 When collecting samples, place the insect sample into the wide end of the tip, close the tube lid.



Citation: Roland Wouters, Sam Mugford, Saskia Hogenhout (05/29/2020). Ambient sample storage system of field-collected insect samples for genomics.
<https://dx.doi.org/10.17504/protocols.io.bqxnjxme>

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