Response to editor/reviewer comments to JoVE62354

We thank reviewers and editors for constructive comments. We responded to each comment below.

1. Please take this opportunity to thoroughly proofread the manuscript to ensure that there are no spelling or grammar issues. E.g. line 146: “enzymatic-shearing..” instead of “..-sheering..”?
    a. Done.
2. Add a single space between the quantity and its unit. E.g. “20 µL” instead of “20µL”, “20 mL” instead of “20mL”, “10 s” instead of “10s”, “4 oC” instead of “4oC”, etc.
    a. Done
3. Line 78: Please specify what 10K represents? Also write it as 10,000, and express it in g.
    a. Done
4. Please provide details about the “magnetic bead separator”. Is the same item referred to as “magnet” (line 93, 96, 99, 102)?. Please use consistent terminology.
    a. Done. Used magnetic bead separator instead of magnet.
5. What are AL, AW1, AW2, AE buffers? Are they part of any commercial kits?
    a. Yes. We provided the product info as part of the JoVE Materials table.
6. JoVE cannot publish manuscripts containing commercial language. This includes trademark symbols (™), registered symbols (®), and company names before an instrument or reagent. Please remove all commercial language from your manuscript and use generic terms instead. All commercial products should be sufficiently referenced in the Table of Materials. E.g. MagAttract, Beadbeater, TissueLyzer, Nanodrop etc.
    a. The names are changed to genetic descriptions that is including the buffer names you listed in comment #5.
7. Please highlight up to 3 pages of the Protocol (including headings and spacing) that identifies the essential steps of the protocol for the video, i.e., the steps that should be visualized to tell the most cohesive story of the Protocol. Remember that non-highlighted Protocol steps will remain in the manuscript, and therefore will still be available to the reader.
    a. Done. Total protocol is <1.5 page. For Steps 3.9-3.17 are repetition of the same process with varying buffer kind and amount so narrative can be changed a little (e.g “repeat this washing steps first with washing buffer 1 and twice with washing buffer 2)”).
8. Please expand the representative results to include text explaining the Representative Results in the context of the technique you have described, e.g., how do these results show the technique, suggestions about how to analyze the outcome, etc. The paragraph text should refer to all of the figures. Data from both successful and sub-optimal experiments can be included.
    a. The Representative Results section was expanded to include more datapoints and relevant suggestions if the concentration deviates from the normal range.
9. Please discuss how this method is cost-effective compared to the other known methods.
    a. A new table of cost analysis is added and relevant results and discussion section is added.
10. Figure 1. Please check the Y-axis label. Also, do not embed the figure in the text. Instead upload it separately through editorial manager.

11. Please ensure that the references appear as the following: [Lastname, F.I., LastName, F.I., LastName, F.I. Article Title. Source. Volume (Issue), FirstPage – LastPage (YEAR).] For more than 6 authors, list only the first author then et al. Do not abbreviate the journal names.
    a. I used the JoVE EndNote format and included the full journal names.
12. Please sort the Materials Table alphabetically by the name of the material.
    a. Done

Reviewers' comments:

Reviewer #1:

No major or minor concerns.

Reviewer #2:

Major Concerns:

1. Why is the reported value for DNA yield 4x higher than the original protocol (Nieman et al)?
    a. The Nieman et al. used *Anopheles gambiae* mosquitoes and this paper used *Aedes aegypti* samples. The sample size is also different in calculating average. We noticed that body size has major impact on the DNA yield but we did not systematically explored this. Also for typical field collection sample processing, body size is not something you can control. We increased our dataset to calculate the average, minimum and maximum concentration and provided in the revised manuscript. We also added notes on the characteristics of magnetic beads can also increase variability in DNA yield.
2. Please include values for absorbance at 280 nm, which represents protein contaminants.
    a. We provided the ratio of 260/280 data in the revised manuscript, as that is what is typically checked for DNA quality for whole genome sequencing.
3. Which downstream test did the authors perform to confirm the quality of the extracted DNA?
    a. We provided the Nanodrop and Qubit for DNA quantity and quality.
4. Please include standard deviation for DNA yield.
    a. Done
5. Authors state in Results that "absorbance below 230 nm may change depending on the concentration of EDTA". This sentence belongs to Discussion. Further, other chemicals also absorb below 230 nm, such as guanidine, ethanol and other organic compounds. Lastly, a reference would be missing for this information.
    a. Sentence has been edited moved to the Discussion section.