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Protocol for C. elegans Homogenization in the Bullet Blender™

The protocol described in this document is for the use of the Bullet Blender™ for the homogenization of *Caenorhabditis elegans* cultures (larval, *dauer*, and adult). This protocol does not specify a particular buffer - you may choose which is most appropriate for your downstream application (nucleic acid isolation, protein extraction, etc.).

Materials Required: worms, aspirator, Bullet Blender™, homogenization buffer, pipettor, microcentrifuge tubes, and 0.5mm zirconium oxide beads (part number ZrOB05).

Instructions

1. Harvest worms from culture plate by washing (either with saline or water) into centrifuge tube.
2. Centrifuge worm suspension to yield a pellet under the washing liquid (200-500g for five minutes).
3. Completely aspirate the supernatant liquid.
4. Inspect the volume of the pellet. It should be 300µL or less in order to get efficient homogenization.
5. Add an equal volume of zirconium oxide beads (0.5mm) to the tube.
6. Add 0.1mL to 0.6mL buffer (2 volumes of buffer for every volume of worms).
7. Close the microcentrifuge tubes.
8. Place tubes into the Bullet Blender™.
9. Set controls for **SPEED 8** and **TIME 2 to 3** minutes.
10. Remove tubes from the instrument.
11. Visually inspect samples, if homogenization is unsatisfactory, run for another two minutes at the **SPEED 10.**
12. Proceed with your downstream application.

SAFETY NOTE!!!

When using a centrifuge to separate your homogenate from the debris and beads, make sure your tubes are balanced.

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