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Protocol for Hepatic (Liver) Tissue Homogenization in the Bullet Blender®

The protocol described in this document is for the use of the Bullet Blender® for the homogenization of liver / hepatic tissue (from a variety of animals). Note that the time and speed settings may differ due to the variation in consistency / texture of liver tissue from species to species. 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: liver tissue, Bullet Blender®, homogenization buffer,

pipettor, microcentrifuge tubes and Red bead lysis kit/Pink bead lysis kit/0.5mm zirconium oxide beads (part number ZrOB05).

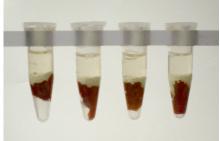
Instructions

1. Cut liver into appropriately sized pieces for analysis (10mg-300mg).

- 2. **OPTIONAL:** Wash tissue 3x with ~1mL PBS. Aspirate. **NOTE:** This step removes external contaminants (blood, etc.).
- **3.** a. Samples 100mg or greater
 Place the sample in Red bead lysis kit tube.
 - b. Samples less than 100mg
 Place the sample in Pink bead lysis kit tube.
 - c. Alternate protocol step for bulk beads Place sample in microcentrifuge tube and add beads to the tube. Use a volume of beads equal to the mass of tissue. **NOTE:** $100 \text{mg} \cong 100 \mu\text{L}$.
- **4.** Add 0.025mL to 0.6mL buffer (2 volumes of buffer for every volume of sample).
- **5.** Close the microcentrifuge tubes.
- **6.** Place tubes into the Bullet Blender®.
- 7. Set controls for **SPEED 8** and **TIME 3** minutes. Press **Start**.
- **8.** After the run, remove tubes from the instrument.
- **9.** Visually inspect samples. If homogenization is unsatisfactory, run for another two minutes at the **SPEED 9.**
- **10.** Proceed with your downstream application.

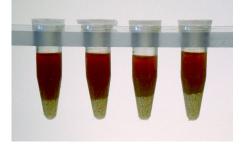
SAFETY NOTE!!!

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



before

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after

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