# Protocol for Kidney Tissue Homogenization in the Bullet Blender®

The protocol described in this document is for the use of the Bullet Blender® for the homogenization of kidney from a variety of animals. Note that the time and speed settings may differ due to the variation in consistency/texture of kidney 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.).

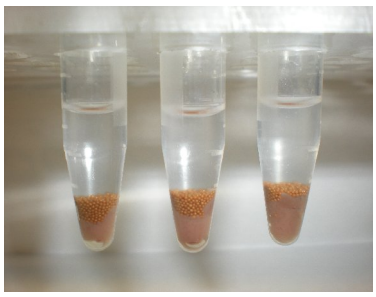
Materials Required: kidney tissue, , Bullet Blender®, homogenization buffer, pipettor, microcentrifuge tubes, and Red bead lysis kit/Pink bead lysis kit/0.5mm zirconium oxide beads (part number ZrOB05).

Instructions

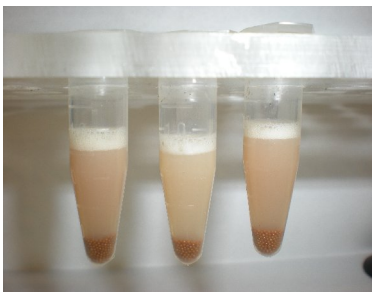
1. Cut kidney into appropriately sized pieces for analysis (10mg-300mg).
2. OPTIONAL: Wash tissue 3x with ~1mL PBS. Aspirate. NOTE: This step removes some external contaminants (blood, etc.).
3. a. *Samples 100mg or greater*
   Place the sample in Red bead lysis kit tube.
   b. *Samples less than 100mg*
   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: 100mg ≅ 100µL.
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 4 minutes. Press Start.
8. After the run, remove tubes from the instrument.
9. Visually inspect samples. If homogenization is unsatisfactory, run for another three minutes at the SPEED 10.
10. Remove sample tubes from the Bullet Blender® and 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



after

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