Bullet Blender[®] 5 Homogenization Protocol for Lung Tissue

The protocol described in this document is for the use of the Bullet Blender® 5 for the homogenization of pulmonary (lung) tissue. If you have difficulty with this protocol, cutting your tissue into smaller pieces will help. 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: lung tissue, Bullet Blender® 5, homogenization buffer,

pipettor, 5mL Axygen® brand tubes, and 3.2mm stainless steel

beads (part number SB32).

Instructions

1. Cut lung into appropriately sized pieces for analysis (0.1g - 1g).

- **2. OPTIONAL:** If desired, wash the tissue 3x with 5mL PBS to remove blood and other contaminants from the tissue.
- **3.** Place sample in 5ML tube and add beads to the tube. Use a volume of beads equal to the mass of tissue. **NOTE:** $100mg \approx 100\mu L$.
- **4.** Add 0.2mL to 2.0mL buffer (2 volumes of buffer for every volume of sample).
- **5.** Tightly screw the centrifuge tubes closed and place them into the Bullet Blender[®].
- **6.** Set controls for **SPEED 9** and **TIME 4** minutes. Press start.
- **7.** After the run, remove the tubes from the instrument.
- **8.** Visually inspect samples, if homogenization is unsatisfactory, run for another three minutes at **SPEED 10**.
- **9.** 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.