Date 05/18/2009

# Protocol for Jejunum or Stomach Tissue Homogenization in the Bullet Blender™

The protocol described in this document is for the use of the Bullet Blender™ for the homogenization of jejunum or stomach / gastric tissue. Note that the time and speed settings, and digestion parameters may differ due to the variation in consistency/texture of 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:** tissue, cell culture hood, Bullet Blender™, homogenization buffer, microcentrifuge tubes, pipettor, and 0.5mm glass beads (part number GB05).

**Instructions**

1. Cut tissue into appropriately sized pieces for analysis (100mg) and place into a microcentrifuge tube. **NOTE:** Try to remove pieces of connective tissue as they do not homogenize well.
2. **OPTIONAL:** Wash tissue 3x with ~1mL PBS. Aspirate. **NOTE:** This step removes any external contaminants (blood, undigested food, etc.).
3. Flash freeze freeze tissue in liquid nitrogen or dry ice/alcohol bath.
4. When ready to homogenize, place tissue in ice bucket to proceed.
5. Add glass beads (0.5mm) to the tube. Use a mass of beads equal to your mass of tissue.
6. Add about 0.3mL buffer (2 volumes of buffer for every volume of cells).
7. Close the centrifuge tubes.
8. Place tubes into the Bullet Blender™.
9. Set controls for **SPEED 8** and **TIME 2** minutes. Press **Start**.
10. After the run, 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.**

Scientific Instrument Services, Inc.™
1027 Old York Rd. Ringoes, NJ 08551-1039
Phone: (908)788-5550 www.sisweb.com Fax: (908) 806-6631