NEXT ADVANCE

Bullet Blender Protocol

Mammalian cell culture

- Extract molecules (DNA, RNA, protein, chemicals)
- Wet final product: up to 300 mg.

Notes on the protocol: 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

One of these Bullet Blenders

- **Bullet Blender** (BBX24)
- **Bullet Blender Blue** (BBX24B)
- **Bullet Blender Storm 24** (BBY24M)
- **Bullet Blender 24 Gold** (BB24-AU)

Reagents

Homogenization buffer

2 x volume of sample

Bead choices

- **0.5 mm zirconium oxide beads** (ZROB05) Use a volume of beads equivalent to 1 x the volume of the sample

Procedure

1. If your sample has been grown on a plate or other solid surface, detach it (e.g, by flooding the plate with PBS and scraping) and place the material in a microcentrifuge tube. Liquid cultures may be placed directly in the tube as long as they are of sufficient density.
2. Centrifuge the suspension to yield a pellet. The pellet should be no larger than 300 ul.
3. Pipette off the supernatant, and resuspend the pellet in 2 volumes of homogenization buffer.
4. Place the sample in the tube with the beads.
5. Close the tubes tightly and place them in the Bullet Blender.
6. Set the controls for Speed 8 and Time 3. Press Start.
7. After the run, remove the tubes from the instrument and visually inspect the samples. If homogenization is incomplete, repeat the homogenization step at a higher speed.
8. Proceed with your downstream application.