

Homogenization in the Bullet Blender® 5 Protocol for Corn (Maize)

The protocol described in this document is for the use of the Bullet Blender® 5 for the homogenization of fresh corn kernels. 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: Fresh corn kernels, Bullet Blender® 5, homogenization buffer, pipettor, 5mL Axygen® brand tubes, and 3.2mm stainless steel beads (part number SB32)

Instructions

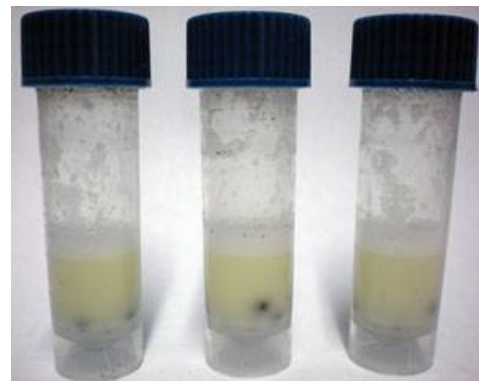
- 1. OPTIONAL:** If desired, wash the kernels 3x with 5ml PBS to remove dirt and other contaminants.
- 2.** Place 1-2 kernels into 5ml tubes.
- 3.** Add a mass of beads equal to 3x the mass of the kernels (~100µL beads for 2 kernels).
- 4.** Add 0.2mL to 2.0mL buffer (2 volumes of buffer for every volume of sample).
- 5.** *Tightly* screw the centrifuge tubes closed and place them into the Bullet Blender®.
- 6.** Set controls for **SPEED 8** 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 two 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.



Before



After