

General Guidelines for the Bullet Blender®

In order to ensure your success in using our products, please read the guidelines provided here. We did the homework so you don't have to.

1. **Use high quality polypropylene tubes.**
2. **Sample preparation is important. Long aspect ratio tissues will homogenize better than those with a low aspect ratio (i.e. long and skinny is better than cube-shaped or round). Do not overload OR underload tubes.**
- 3.

<i>Product</i>	<i>Minimum Sample</i>	<i>Maximum Sample</i>	<i>Maximum Volume</i>
BBX24 models	0.01g	0.3g	1.2 or 1.5mL*
BBX5MB	0.1g	1.0g	3.5 mL*
BB50-DX	0.1g	3.5g	20mL

* for 1.7 or 2.0mL tubes, respectively.

4. **Proportions of grinding agents and buffer are relative to tissue.**
 - Choose your beads based on the toughness of the tissue. Check our website for details.
 - Use a volume of beads equal to the mass of tissue. **NOTE:** 100mg \approx 100 μ L.
 - Use a volume of of buffer that is 2X the volume of your sample to be homogenized. **IMPORTANT NOTE:** If your protocol or kit calls for a larger volume of extraction reagent, use the volume that we recommend and add the remaining volume of reagent post-homogenization. You can then run the samples in the Bullet Blender for one minute at speed 2 to mix the tube contents. Adding a large a volume of homogenization buffer may overload your tubes, resulting in leakage and sub-optimal homogenization.

If one run is not satisfactory:
Simply run the samples again! There is no need to change the beads or tubes.

Special Considerations for RNA isolation:

Be sure to use RNase-free beads and tubes. Tubes and beads may be purchased RNase-clean, or you may clean them your self.

Phenol-based extraction reagents (TRIzol®, TRI Reagent®) are not recommended for use with stainless steel beads. We recommend using another type of bead with these reagents, or use a non-phenol based extraction reagent as the homogenization buffer, such as a guanidine thiocyanate based reagent.

Special Note for the Bullet Blender® 5 and the Bullet Blender® 50-DX:

Load at least three tubes in the Bullet Blender 5 and at least two tubes inside of sleeves in the Bullet Blender 50-DX . Due to the larger motor, tubes may break if the unit is underloaded. Water-filled tubes may be used for this purpose. Also, if you run the same tubes multiple times, be sure that the caps are tightly screwed on before each additional run.

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NEXT ADVANCE, INC.
24 Prospect Avenue, Averill Park, NY 12018 USA
Phone [518] 674-3510 Fax [518] 674-0189 www.nextadvance.com