#### Training Manual for the Bullet Blender<sup>®</sup>





Revision 16B17

### Introduction

This manual will guide you through using the Bullet Blender for the first time.

# For this training session, we will use a leaf from a houseplant or tree.





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### Step 1: Choose Sample



Houseplant leaves like philodendron or spider plant



Tree leaves like

beech or maple

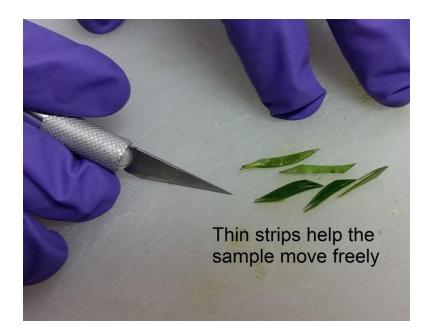


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#### Step 2 – Prepare sample







Take a piece of leaf that is as long as a microcentrifuge tube, and half as wide. Slice it into strips.

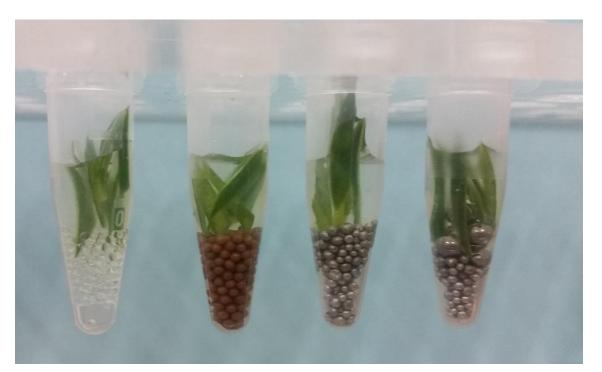


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#### Step 3 – Load tubes

200 µl of beads or a Red or Navy kit + 500 µl water You can use different kinds of beads to see how bead choice affects homogenization



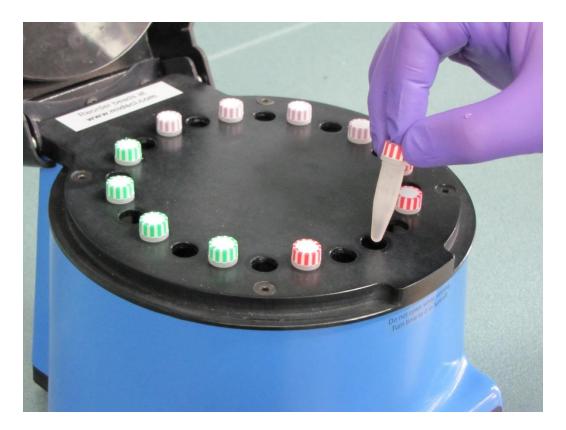




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#### Step 4 – Load Bullet Blender





Tubes do not have to "balance" but even spacing helps

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#### Step 5 – Run Bullet Blender





Set time, speed and press "Start" For this session, set time to 3, speed to 10

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#### Step 6 – Remove tubes

#### Fully homogenized

## Incomplete homogenization

Remove your tubes from the Bullet Blender and confirm the samples are homogenized. There should be no pieces visible.



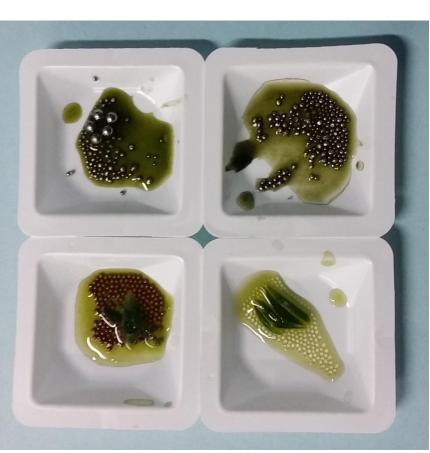
NEXT ADVANCE

### Effect of Different Beads

Navy kit

#### ZrOB10 beads





SSB14B beads

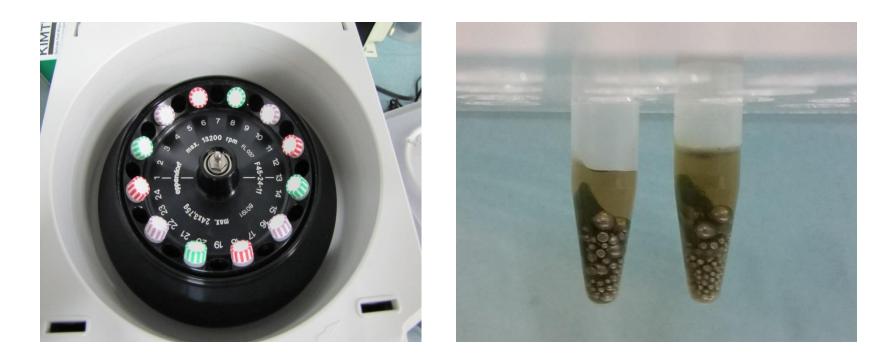
GB10 beads

All samples run 3 minutes speed 10



NEXT ADVANCE

### Step 7 – Centrifuge samples (optional)



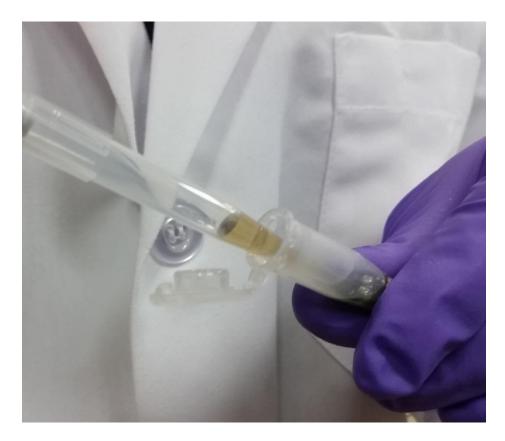


Typical centrifuge settings are 12,000 x g for 8 minutes to clarify homogenate Insoluble material like cellulose will sink

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#### Step 8 – Remove homogenate



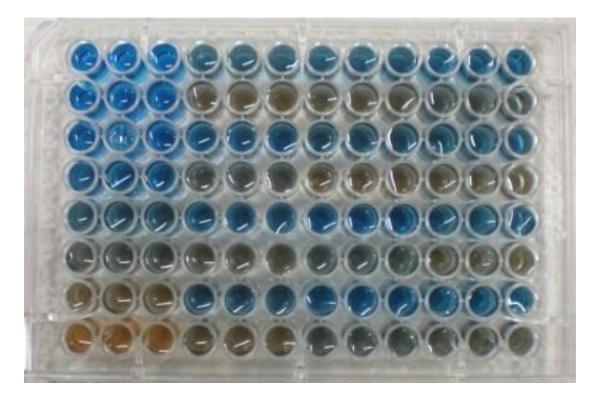


Homogenate can be removed with a pipette and placed in a new tube.



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#### Step 9 – Use sample in your assay







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