

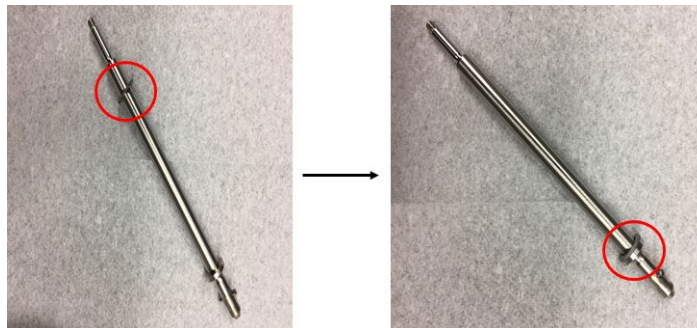
Homogenizer Instructions

Homogenizer setup

Here is a picture of all the parts needed to setup the homogenizer:



1. Make sure plastic o-ring is on inner tool piece:



2. Place cylindrical metallic piece on the end of the inner tool piece:



3. Place inner tool piece in the outer tool piece:



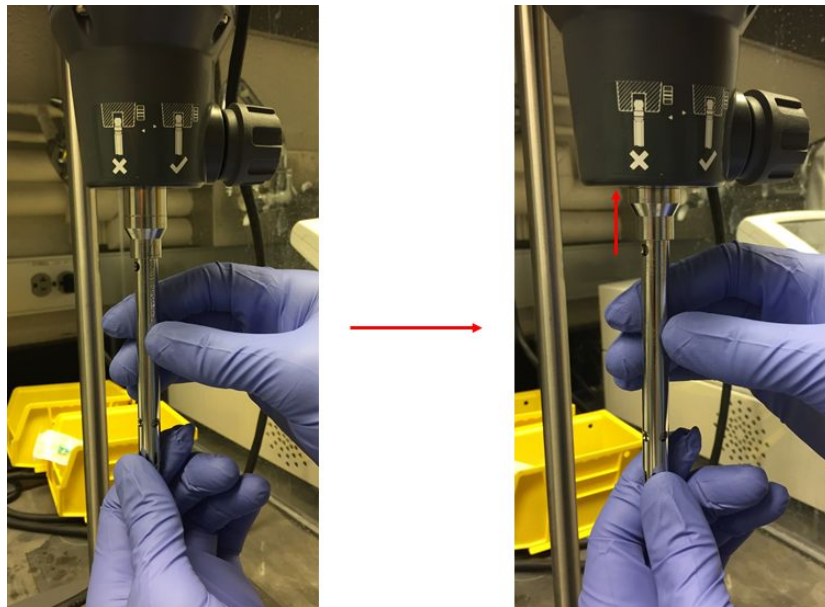
4. Place the large plastic bushing piece in the sharp end of the outer tool piece, and then the metallic rotor:



5. Screw in the rotor using the screw pieces. Don't overscrew the rotor in! Only turn the pieces until the rotor is tight. Hold the left piece and rotate the right handle clockwise to tighten:



6. Next, place the assembled tool into the homogenizer. Ensure that the tool is pushed all the way up into the homogenizer. This may require some force and/or rotating of the tool:



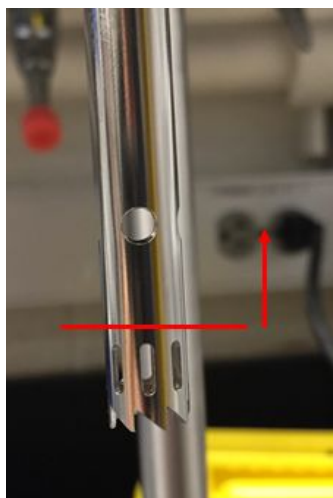
7. Once inserted, rotate the knob on the side of the disperser to tighten it:



8. The homogenizer is now setup to run.

Sample Preparation

Place material in a beaker or round bottom flask. To determine the amount of solvent that is needed, compare to the homogenizer. The level of solvent in the container must be able to cover the rotor/stator:



solvent must be above the line

Operation

Notes:

DO NOT operate the disperser if the tool is not immersed in solvent.

The homogenizer can only be run for a MAXIMUM of 5 minutes at a time to prevent overheating. After 5 minutes of running, let the homogenizer cool down for at least 5 minutes.

If the homogenizer becomes clogged, turn off the homogenizer immediately. Remove the material that is clogging the homogenizer and clean the tool. This is possible especially when homogenizing cellulose fibers or very viscous polymer solutions.

The homogenizer works best when the pieces that make up the tool are dry. Thus, when the tool is removed to be cleaned, dry the pieces before operating the homogenizer again.

1. To operate, place the mixture up to the dispersing tool and immerse the tool in the mixture.
2. Turn on the disperser with the on/off switch.
3. Rotate the homogenizer knob to the desired speed.
4. After 5 minutes, turn off the homogenizer and let it cool.
5. When completely done with the homogenizer, remove the tool and disassemble it in the opposite order that it was put together. Clean the tool with a solvent that will remove all of the polymer/fibers that are on the tool.