

| LSOP Title | Using the grinder |
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| LSOP No. | LSOP50 |
| Version | 1.1 |
| Location | UQ Node/Centre-wide |
| Policy/Procedure Link | |
| Risk Assessment | |
| Approved by | Elizabeth Dun |
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1.0 Scope

This procedure covers the use of the grinder including cooling process for the grinding blocks.

This LSOP does not cover preparing samples for grinding.

2.0 Definitions

3.0 Materials and Equipment

1. Grinding blocks
2. 2mL tube rack
3. Cotton gloves
4. Lab gloves
5. Samples (with grinding balls and tissue inside)
6. Safety glasses

4.0 Prescribed Actions

*****Ensure tubes are labelled on the side as well as the top, as the grinding procedure may wear away at the label*****

1. Put the grinding blocks and lid and a solid plastic 2mL tube rack in the -80°C freezer for 20mins.
2. ***Wear cotton gloves underneath lab gloves.***
3. When blocks have cooled, put your tubes (appropriate tube containing sample and grinding ball(s) as outlined in grinding SOP) in each block evenly, and arrange them so that the pressure of the lid will be evenly distributed. This means one tube on each corner and then scattered

LABORATORY STANDARD OPERATING PROCEDURE (LSOP)

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- over the rest of the block. Make sure all tubes are in properly and tops are at sitting at the same height.
- Put the grinding blocks with your samples back into -80°C freezer for 10mins.
 - Turn on grinder, and use dials to set to 40s and MAX speed (1750 RPM) (or time and speed outlined in grinding SOP).
 - Wear safety glasses.**
 - Quickly load grinding blocks with samples into grinder. Make sure the blocks aren't touching the rod in the middle.
 - Make sure the loose lid sits inside the screw down lid, sometimes it gets stuck on a corner.



Figure 2: Make sure the orange screw is fastened tightly (if not, it will make a big noise. Immediately stop machine if this noise occurs)

- Make sure the silver button on the screw down lid has popped out after screwing the top lid down firmly.

LABORATORY STANDARD OPERATING PROCEDURE (LSOP)

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10. Close the outer lid, Press start to grind for 40s at max speed. Stop after a few seconds to further tighten the lid (see figure 3).



Figure 3: Press start to grind for allotted time at max speed. The green button is the start button.

11. Restart the grind. Watch the plates through the window, if the blur of the plates appears to slide, stop the machine and tighten the screw down lid. Restart the grind.
12. Put the blocks back in the -80°C freezer for 10mins and then repeat the grind (step 7-11).
13. Check your tubes and repeat if needed. If you had a large amount of tissue the top of your lids on your tubes will have turned green if they are finished grinding. If you don't have much tissue you can run them a 3rd time just to be sure.
14. Put samples into solid 2mL tube rack, with labelled lid, and store in -80°C freezer in temporary storage area until ready for further processing (RNA or hormone extraction, etc.).