

LSOP Title	Cleaning Procedure: Grinding Beads and Plastic Pestles
LSOP No.	LSOP07
Version	1.1
Location	UQ Node/Centre-wide
Policy/Procedure Link	UQ -waste UQ- Equipment
Risk Assessments	
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1.0 Scope

This protocol outlines the cleaning procedures for grinding beads and plastic pestles for RNA and DNA extractions

2.0 Definitions

RO – reverse osmosis (de-ionised water)

HCl – hydrochloric acid

DEPC – diethyl pyrocarbonate

3.0 Materials and Equipment

RNA

1. Grinding beads (dirty)
2. Pestles (dirty)
3. RO water
4. Decon
5. DEPC
6. Autoclave
7. Autoclavable container

DNA

1. Grinding beads (dirty)
2. Pestles (dirty)
3. Decon
4. HCl
5. Autoclave
6. Autoclavable container



4.0 Prescribed Actions

RNA extraction

1. Grinding beads only: put beads straight into water after use (to stop anything from getting stuck on the surface)
2. Soak beads/pestles in decon and water for at least 15 min (or overnight), shaking a few times to mix them up.
3. Rinse with tap water, then rinse a few times with RO water until there are no suds left.
4. Drain as much water as possible from the container.
5. Transfer beads/pestles to an autoclavable container, treat the beads/pestles with 0.1% DEPC solution (DEPC destroys RNases) with shaking for at least 1 hour or up to over night (minimize volume of DEPC used as DEPC is expensive)
6. Autoclave container as-is, and dry for re-use
NB: DEPC is safe to dispose of in the sink after autoclaving
7. Return clean beads to grinding area, and clean pestles to the shelf where the mortar and pestle sets live.



DNA extraction

1. Grinding beads only: put beads straight into water after use (to stop anything from getting stuck on the surface)



2. Soak beads/pestles in decon and water for at least 15 min (or overnight), shaking a few times to mix them up.
3. Rinse with tap water, then rinse a few times with RO water until there are no suds left.



4. Soak beads in 0.1 M HCl for 30 min

NB: use the coffee plunger on the sink to allow for easy removal of liquid after acid soak



5. Drain as much liquid as possible for the container

NB: flush the sink with water when disposing of an acid

6. Rinse well with RO water
7. Transfer beads/pestles to an autoclavable container, and autoclave and dry for re-use
8. Return clean beads to grinding area, and clean pestles to the shelf where the mortar and pestle sets live.