



Lash Miller Laboratories St. George Campus

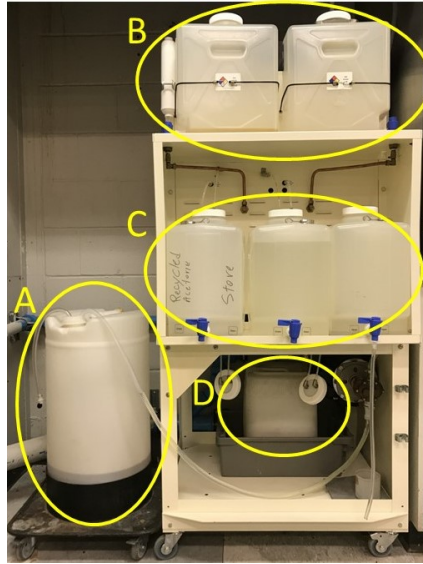
OPS-SOP- 15	Revision #: 01	Implementation Date: 2019-04-29	Last Reviewed/ Update Date: 2019-04-29	Page #: 1 of 3 (supplemented by OPS-SOP-12)
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Standard Operating Procedure: Operation of the Acetone Recycling Unit

- 1. Purpose:** to provide step by step guidance on how to use the Acetone Recycler
- 2. Scope:** applies to all staff in the Chemical Stores that process acetone through the recycling unit.
- 3. Prerequisites:** EH&S WHMIS & Chemical Safety. Hands-on training (provided by the Manager of Lab Technical support and supplies)
- 4. Responsibilities:** it is the responsibility of the person running acetone through the recycler to follow proper procedure to prevent spills and exposure to themselves or others in the lab.

5.

Personal Protective Equipment (PPE)	Acetone Recycler Receptacle
	



5. Procedure:

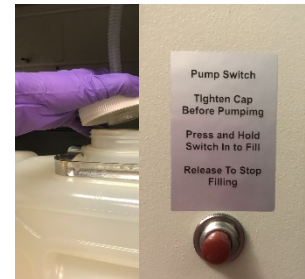
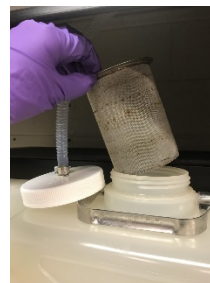
- Processing of recycled acetone will commence ONLY at the end of the work day so that recycling occurs overnight.
- Dispensing takes approximately 15 minutes.
- Respirators are NOT required to dispense or run recycling. The risk assessment performed by Health and Safety is available upon request.
- If personnel chooses to wear a respirator during operation of the acetone recycling unit and dispensing; the manager will ensure fit-testing, training in the use of respirators and will produce the proper respirator as per fir-testing recommendation.

5.1 – filling the waste receptacle

- Inspect waste receptacle to ensure no large lab supply particulate is present.
 - If waste receptacle is contaminated with lab consumables etc. contact research group to pick up waste receptacle and treat as chemical waste.
- Place waste receptacle adjacent to waste collection carboy to the left of the recycling unit (A in picture above).
- Connect tygon tubing adapter to the spigot on the acetone recycling receptacle.
- Open spigot to drain acetone from waste receptacle into waste collection carboy.
- Once emptied, detach tygon tubing from waste receptacle and place waste receptacle on floor for pick up by research groups.

5.2 – Filling the acetone recycler

- Fill both top receptacles on the acetone recycling unit (B in picture above).
- Ensure metal filter basket is in place.
- Place white cap connected to unit tubing on receptacle and close tightly.
- Once the system is closed, press the red fill button on the right side on the unit to fill the receptacle to the 0-0 line at the top.



- Once receptacle is full, repeat process to fill the second container on the top of the recycling unit.

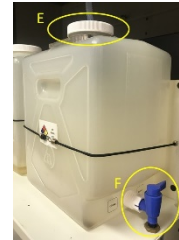
5.3 – Running a 5 gallon cycle

- Only to be run when there is not enough acetone to run a full 10 Gallon cycle.
- Fill only the receptacle on the right of the unit (B in picture above).
- See 10 gallon cycle for processing instructions.



5.4 – Running a 10 gallon cycle

- Press Enter to recycle Acetone.
- Press NO to run a 10 gallon cycle (press NEXT to run a 5 gallon cycle).
- Check containers; loosen lid on top receptacle (E picture to right) and open spigot (F picture to right).
- Ensure the lid on the clean acetone catch receptacle is on tight (G picture to right).
- Press enter to fill the distillation unit. Fill can take up to 20 min.
- Observe container, be sure acetone has begun to gravity fill into the boiling tank.
- Recycling process will begin automatically.
- Container two will fill at the completion of the first 5-gallon cycle.



5.5 – Dispensing Clean Acetone

- Recycled acetone collects in recycled receptacles (C picture above).
- Attach tygon tubing to spigot on the clean acetone receptacle (H picture above/ right).
- Place tygon tubing into opening of available flammable acetone safety canister.
- Open spigot to allow clean acetone to flow into canister (H picture above/ right).
- Top up 20L flammable acetone safety canister with acetone from a second acetone receptacle.
- Once completed filled, close spigot.
- Dispensing takes approximately 15 minutes.



6. Other

- Adding a few drops of acid helps prevent cleaned acetone having a smell, which develops from the production of amines during the fractional distillation process.