

# Acetic Acid – Operating Procedure

Updated on 11/28/2018 by IC

## Warnings and Notes

- Acetic Acid is a corrosive (it can burn your flesh, eyes, lungs, and mucous membranes) liquid.
- You must read its SDS before you use it; the SDSs are available in the yellow binders located in the cleanroom, on the UNDF-Tools shared drive, and in the "Current Users" section of the website ([udnf.udel.edu](http://udnf.udel.edu)).
- Never use plastic beakers for Acetic Acid.
- Acetic Acid may only be used in the plastic wet bench in Bay 1 of the UDNF cleanroom.
- You must have a safety buddy to use Acetic Acid. The safety buddy does not have to stand by you or wear the PPE listed in the next section. However, the safety buddy: (1) must be present in the cleanroom at all times while you use Acetic Acid and while you clean up and (2) must check on you at least every 10 minutes.
- You must log into the "Chem - Acetic Acid" tool in FOM before you start work and log out once you are done using the chemical. You must make reservations in advance in FOM.
- Identify the closest eye wash and safety shower before you start work.
- If Acetic Acid gets on any area of your body you must rinse the exposed area with water for at least 15 minutes.
- You must report all chemical spills and exposures to UDNF staff.
- Acetic Acid may be used only during staffed hours (typically 08:30-17:00, M-F while the University is open). Unstaffed hours will be announced via email and will be posted on the UNDF Calendar in FOM.
- You should expect to find the working area clean and dry and are required to leave the working area clean and dry. Please ask for staff

assistance as needed.

## Emergency Procedures

- In case of **skin contact**: Flush the affected area(s) while removing all contaminated clothing with large amounts of water for at least 15 minutes. Seek immediate medical attention.
- In case of **eye contact**: Flush the affected eye(s) with large amounts of water for at least 15 minutes. Seek immediate medical attention.
- In case of **inhalation**: Remove the exposed person to fresh air – only if it is safe to do so. Seek medical attention for symptoms such as respiratory irritation, cough, or tightness of chest; please keep in mind that symptoms may be delayed.

## Personal Protective Equipment and Tools

- In addition to the normal UDNF cleanroom suit, the following safety PPE must be worn when handling Acetic Acid:
  - Chemical apron
  - Face shield
  - Chemical resistant gloves
- The PPE must be inspected before you start any work:
  - If the gloves have any cracks, tears, holes, etc. please do not use them; ask staff for a new pair of gloves.
  - If the apron is not completely dry, please do not use it; please notify staff.
- Only use plastic tweezers or the blue locking forceps when working with Acetic Acid.

## Use Procedure

- Identify your safety buddy.
- Inspect PPE; if anything is out of order with the PPE, please **STOP** and notify UDNF staff.
- Log into “Chem – Acetic Acid” tool in FOM. Enter the name of your safety buddy in the “Comment” section on the pop up window.
- All beakers containing Acetic Acid must be placed in the white secondary containment tray located in the fume hood.
- Use one of the pre-formatted labels available in the file folder in Bay 1 to write the name of the chemical(s), date and time, your name, and contact info. Place the note under the beaker that will contain Acetic Acid.
- Bring a number of cleanroom wipers into the hood and separate them; you will need them to dry the chemically resistant gloves if they get wet and to clean up when you are done using the chemicals.
- Attach you sample(s) to the blue locking forceps and bring them into the fume hood.
- Put on the additional PPE in the following order:
  - Apron
  - Face shield
  - Chemical resistant gloves
- Fill a glass beaker with DI water for rinsing your sample(s).
- Pour Acetic Acid into the clean, dry glass beaker that was placed onto the label you filled out previously.
- Place the bottle with the fresh chemical into the cabinet located under the wet benches.
- Place the sample into the beaker containing Acetic Acid.
- Start the timer.
- Remove the sample from the Acetic Acid beaker and place into the DI water beaker for rinsing.
- Dry the sample with nitrogen.

## Waste Disposal

- Remove the cap from the waste bottle.
- Rinse the funnel with water over the sink.
- Pour Acetic Acid into the appropriate waste bottle using the funnel; do not overfill.
- **Note:** If you start a new waste bottle make sure it is dry on the inside and outside.
- Place the cap on the waste bottle.
- Rinse the funnel with water over the sink.

## Cleanup and Final Steps

- Wash both beakers with DI water three times over the sink.
- Place the beakers in the designated location.
- Remove the label and dispose of it into the white trash can located next to the wet bench.
- Wipe off any liquids from the bench, and dispose of the wipers into the white trash can located next to the wet bench.
- Wash chemical resistant gloves with DI water over the sink.
- Dry the chemical resistant gloves with wipers, and dispose of the wipers into the white trash can located next to the wet bench.
- Wipe off any liquids from the apron, and dispose of the wipers into the white trash can located in front of the wet bench.
- Dry the chemical resistant gloves with wipers, and dispose of the wipers into the white trash can located next the wet bench.
- Remove PPE in the following order:
  - Remove gloves and place them in the fume hood.
  - Remove face shield.
  - Remove apron.
- Log out of “Chem – Acetic Acid” tool in FOM.