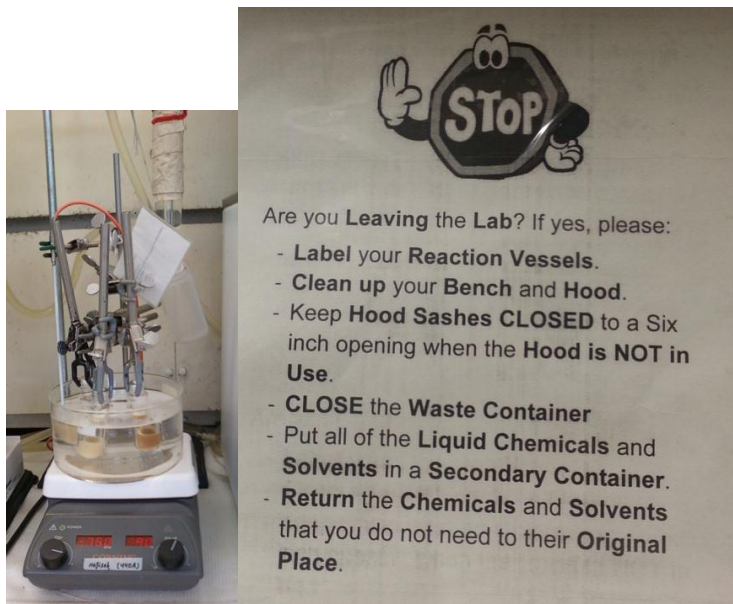




SAFETY ALERT

Dangers of: Unattended Operations



Incident

Injuries, floods, fires & explosions have occurred because a reaction was left unattended and overheated or over-flowed.

How did this happen?

Operation was not set-up to “fail-safe”

What is being done to address this risk?

Safety Alerts sent out to researchers to make them aware of equipment and procedures to help control these risks.

Action for Researchers and Laboratory workers?

Source: <http://chem.chem.rochester.edu/~nvd/leaving.htm>

Be aware of others reactions.

Last one out, first in, should check reaction conditions match intended conditions posted nearby

When setting up operations, check at 10 min to verify temp and again at 30 min to check that it's stable.

Only leave operations that “Fail Safe”-

- Internal shut-offs, closed water systems, mild conditions , use commercial equipment designed to run unattended
- “successfully run the reaction before and know it can be left safely”

Do NOT LEAVE during time-sensitive steps (reaction, quench, workup), during middle of column chromatography, or if unstable compounds are not stored properly

Before leaving

- Verify stability (constant temp for 1 hr) and % completion (< 25%)
- Notify someone who will be in building while you are away
- Post signage
 - Contact information
 - Hazards of the materials & set-up
 - Proper set points for adjustable parameters i.e.
 - temp for heat plate
 - speed for stir bar
 - approximate valve position/flow rate for: gas, vacuum, air, water etc
 - Signs of a problem
 - Emergency shut down instructions
 - Sequence and materials to turn off

Times listed below indicate how long it is acceptable to leave operation before posting is required, depending upon [ACS guidelines for Chemical Safety Levels \(CSL\)](https://docs.google.com/spreadsheets/ccc?key=0AgrFk3teELr0dHZ1TGM0eGpDcUVmQU53MzFwQmxnaWc&usp=sharing)
<https://docs.google.com/spreadsheets/ccc?key=0AgrFk3teELr0dHZ1TGM0eGpDcUVmQU53MzFwQmxnaWc&usp=sharing>
 involved.

CSL1	CSL2	CSL3	CSL4
Weekend 48 hrs	Overnight Max 24 hr	Max 8 hours (half-day)	Max. 2 hours (lunch)
or	plus	plus	
Unlimited with detector	specific restrictions	specific restrictions	

If you have questions regarding this alert please contact Joe Klancher, DEHS, at 626-3611.