

# Phosgene Manipulations

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# Weighing of Hazardous Chemicals

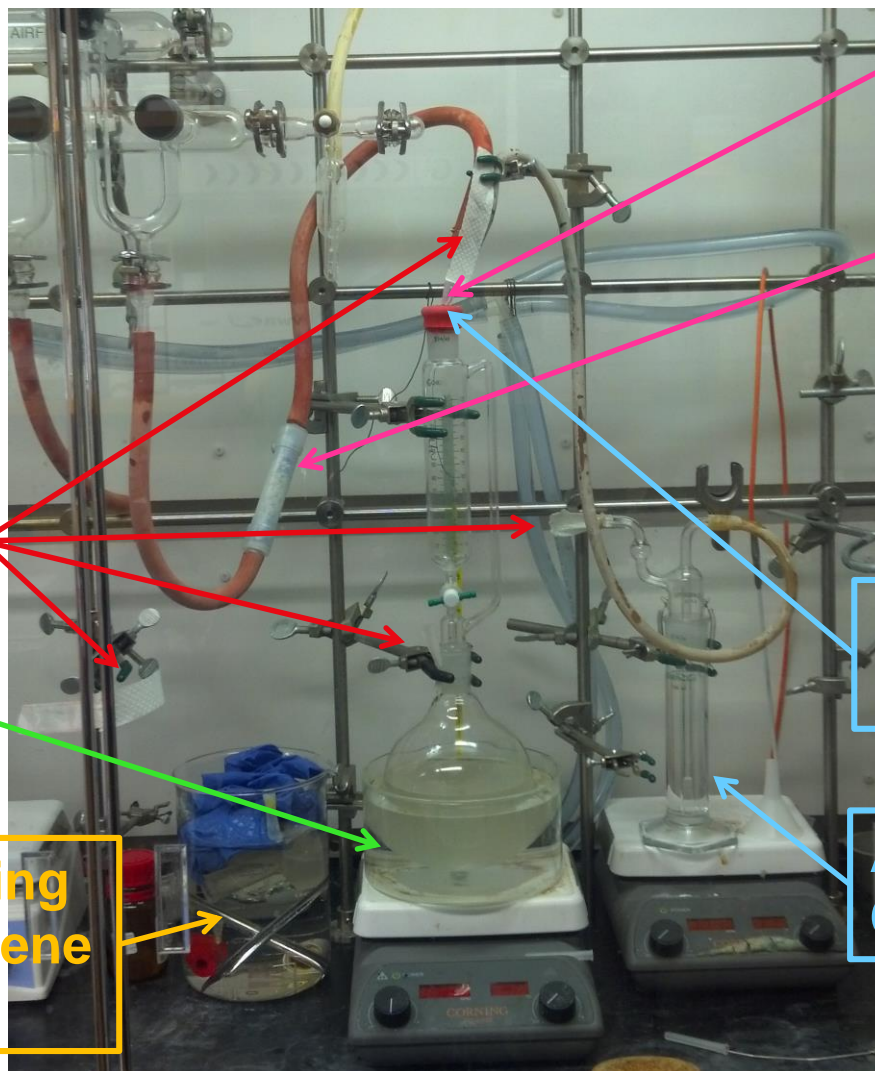
(Triphosgene, Chemotherapeutics, *etc.*)

- 1) Pre-weigh vial with lid
- 2) In your hood, add the chemical to the vial, seal with lid
- 3) Weigh vial, repeat 2 & 3 until the desired amount of reagent is obtained
- 4) Using diphosgene, all needles must be rinsed (x20) in a solvent compatible with the reagent and placed into the KOH (aq) solution that should be at your hood
- 5) Reactions must be quenched before opening to the atmosphere

**THIS IS FOR THE SAFETY OF YOU AND YOUR LABMATES**

**IF YOU HAVE AN ACCIDENT OR SPILL EVACUATE THE LAB IMMEDIATELY AND CALL EHS. EHS WILL CLEAN UP THE ACCIDENT/SPILL**

# Large Scale Phosgene Manipulations (> 2 g)



**Triphosgene Test Strips**

**Ice Bath - during quenching only**

**KOH bath for anything contacting triphosgene during reaction**

**N<sub>2</sub> going into reaction**

**KOH trap to protect N<sub>2</sub> line**

**outlet to phosgene scrubber**

**Aq. KOH, NaOH, or Ca(OH)<sub>2</sub> scrubber**

# Small Scale Phosgene Manipulations



Triphosgene test strips at outlet to hood and potential leak locations

< 0.10 g

N<sub>2</sub> going into reaction

KOH trap to protect N<sub>2</sub> line

Outlet to KOH solid phosgene trap

KOH bath for anything contacting triphosgene during reaction

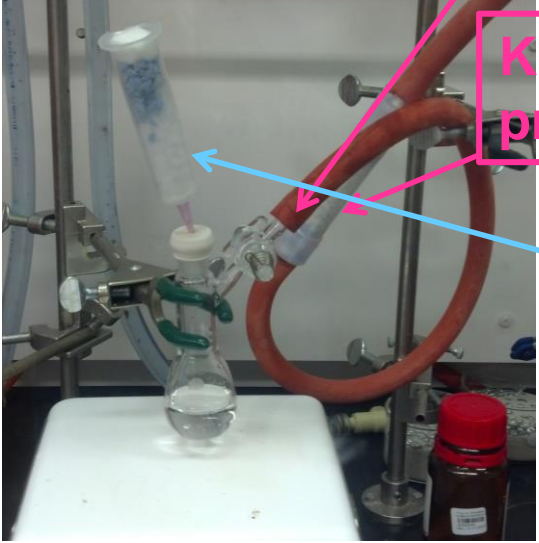
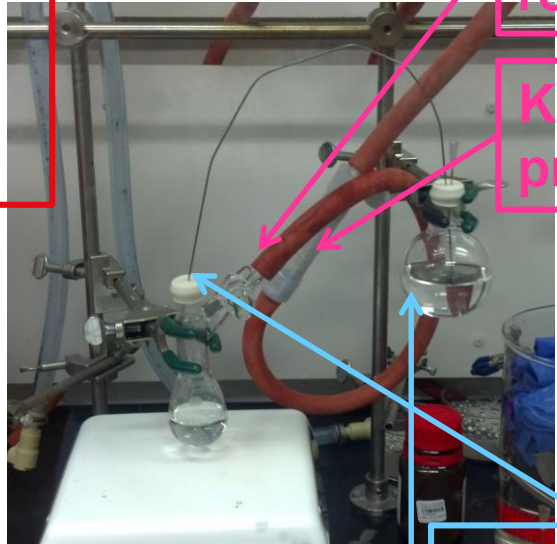
0.10 to 2.0 g

N<sub>2</sub> going into reaction

KOH trap to protect N<sub>2</sub> line

outlet to phosgene scrubber

Aq. KOH, NaOH, or Ca(OH)<sub>2</sub> scrubber



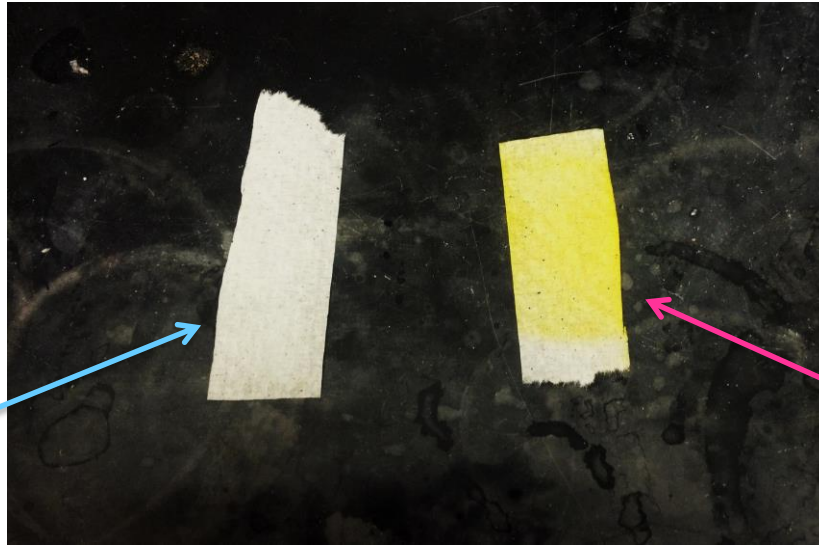
# Phosgene Detection: Use of Test Strips

5% w/v 4-diphenylamine

5% w/v 4-dimethylaminobenzaldehyde

Ethanol

Negative:  
No phosgene  
detected



Positive:  
Phosgene  
detected

**Note:** As test strips age they become light yellow/brown, they will still show a significant change to bright yellow upon detection of phosgene.