

The High Pressure Chemistry Facility in the Penthouse of Roger Adams Lab

Introduction:

The High Pressure Chemistry Facility is located in the penthouse of Roger Adams Lab. It is available 24/7 to trained students who have access keys. The lab has two explosion-resistant cells containing large- and small-scale equipment respectively, a small workbench with storage drawers, and an operations panel. It has no hoods, nor any convenient method of manipulating reagents. Some loading and unloading must be done remotely, in a lab. This is especially important for air-sensitive or noxious materials. Students who wish to use the facility should arrange training with Professor Boulanger (wboulang@illinois.edu). For consistency and safety, we prefer that training is not done by other students. Anyone who has been trained may use the lab, but each use creates a small charge which must be made against a CFOP account. Documentation of use is mandatory. Access is either by having a key issued, using a group access key, or using the key of another group. All equipment removed from the facility, even briefly, must be checked out. Failure to do this results in a substantial charge.

General Lab Capabilities

Stirred or rocked autoclave reactions, with heat to 300 °C
Custom pressure vessel use on shelf
Heated Carius tube reactions
Small scale pressure reactions using a glass liner
Large scale (up to 4 liters)
Reactions with two or more gases (e.g. hydroformulations)
Reaction temperature or pressure tracking
Low pressure hydrogenator (Parr Shaker)
Compressor to reach up to 5,000 psi

If you have problems with hydrogenation or special needs, don't hesitate to contact Professor Boulanger, preferably by e-mail: wboulang@illinois.edu