



## Introduction

Compressed gases can expose users to a number of physical and chemical hazards, which are dependent on the properties of the particular gas and the nature of the cylinder. These hazards must be kept in mind during all phases of the cylinder life cycle including receipt, handling, storage and return in order to ensure that cylinder integrity is maintained and cylinders no longer in use are disposed of promptly

Prudent procedures for the use of compressed gas cylinders include purchasing cylinders as appropriate to the process, selecting the smallest cylinder that meets the research need, ensuring proper transportation and storage, identification of contents, handling and use, and marking and timely return of empty cylinders.

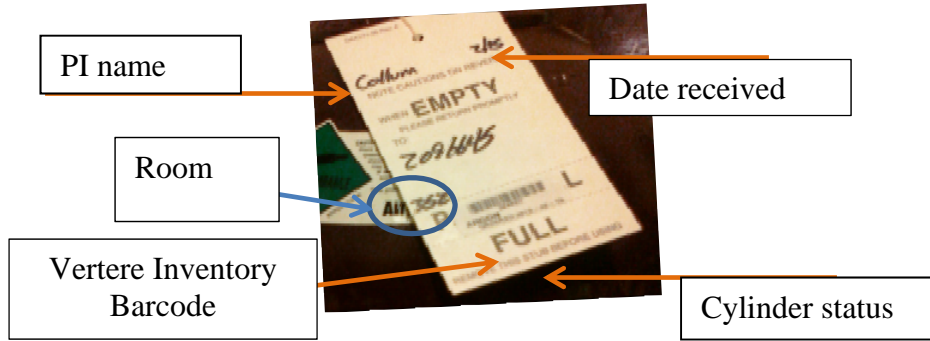
The practice of purchasing un-returnable lecture bottles is discouraged as it leads to the accumulation of partially filled cylinders which can prove costly to dispose of. If you must purchase lecture bottles, ensure that they are clearly labeled and included in the chemical inventory.

### I. Ordering & Delivery of Compressed Gas Cylinders

The University's compressed gas supplier offers just-in-time service. This means that in most cases, cylinders will arrive as early as one day following placement of an order. The vendor will deliver the gases to the appropriate designated area.

Prior to ordering compressed gases, users should check their inventory in Vertere to ensure that they do not have unused stores of the desired compressed gas. Users should also verify that there is space available in the use area to safely store the number of cylinders being ordered.

Facilities management personnel will place a cylinder tag on each container. This tag will be used primarily to differentiate between empty and full cylinders. The tag will be labeled with the PI name, date received, room and order number. A Vertere inventory barcode will be created and affixed to the cylinder tag.

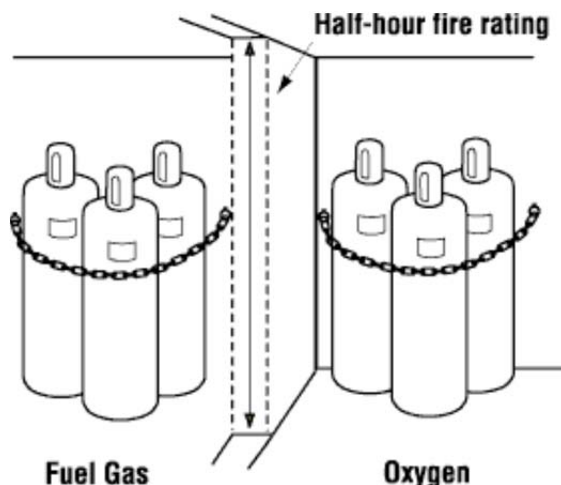


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## II. Storage of Compressed Gas Cylinders

Once processed, compressed gas cylinders will be stored temporarily either in Room 179 or Room 181 on the Olin Chemistry Research Wing loading dock until they can be picked up by the research group.

New York State Fire Code requires that compressed gas cylinders be protected from temperature extremes and physical damage. Cylinders cannot be stored in hallways or otherwise block means of egress. Cylinders must not be placed in an area where they might come in contact with or become part of an electrical circuit. Additionally, compressed gases must be segregated based on the hazard class of their contents. Cylinders containing oxygen or oxidizing gases must be separated from cylinders containing flammable gases by a minimum distance of 20 feet or by a barrier at least 5 feet high having a fire-resistance rating of at least one-half hour. Empty cylinders must also be separated from full cylinders using the same segregation scheme. Cylinders must be stored in an upright position with the valve end up unless designed for horizontal use. An upright position includes conditions where the cylinder axis is inclined as much as 45 degrees from the vertical.



Areas used for the storage of compressed gases must be secured against unauthorized access.

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Room 181 on the Olin Chemistry Research Wing loading dock has been designated as the storage area for flammable, toxic and/ or pyrophoric gases.

**OLIN CHEMISTRY RESEARCH WING**  
**[2083] Room 181**


Contact	Name	Campus Address	Day Phone	Night Phone
Primary	David R. Neish (drn2)	Olin Chemistry Research Wing, Room B76	607/255-7309	607-227-8791
Secondary	Larry James (ljs56)	Olin Chemistry Research Wing, Room Stall (ljs56) B76	607/255-7309	607-220-8219
Tertiary	No tertiary contact on file			
Bldg Coord	Larry James (LJS56)	Olin Chemistry Research Wing, Room B76	607/255-7309	

**Access Limitations**  
Faculty, Staff, and Students


**Area Hazards**



COMPRESSED GASES



CRYOGEN



FLAMMABLE GAS

**Warnings**  
Eating and drinking prohibited  
Door must be locked when unoccupied  
Eye protection required at all times

**Emergency Response**  
Storage Room for Gas Cylinders  
Storage Room contains a large quantity of flammable liquids  
Several cryogenic tanks containing liquid nitrogen are located about the lab

**Audit Info**  
HASP last updated (Source): 07/09/2012

Room 179 Olin Chemistry Research Wing loading dock has been designated as the storage area for non-flammable, oxidizing and/ or corrosive gases.

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OLIN CHEMISTRY RESEARCH WING [2083] Room 179				
Contact	Name	Campus Address	Day Phone	Night Phone
Primary	David R. Neish (drn2)	Olin Chemistry Research Wing, Room B76	607/255-7309	607-227-8791
Secondary	Larry James (ljs56)	Olin Chemistry Research Wing, Room Stall (ljs56) B76	607/255-7309	607-220-8219
Tertiary	No tertiary contact on file			
Bldg Coord	Larry James (ljs56)	Olin Chemistry Research Wing, Room Stall B76	607/255-7309	

**Access Limitations**  
Other Individuals with Permission

**Area Hazards**





**Warnings**  
Eating and drinking prohibited  
Door must be locked when unoccupied  
Eye protection required at all times

**Emergency Response**  
Storage Room for Gas Cylinders

**Audit Info**  
HASP last updated (Impact): 09/06/2012

### III. Distribution of Compressed Gas Cylinders

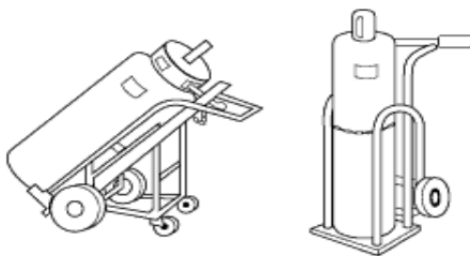
Users should be aware that gas cylinders generally arrive the day after the order has been received and upon arrival will be placed in the appropriate storage area. Users will have a period of 30 days in which to remove cylinders from the storage area. Facilities management will notify a user or user group when a cylinder is approaching the 30-day storage limit. Cylinders not retrieved within a week of the 30-day notification will be returned to the vendor.

### IV. Retrieving Compressed Gas Cylinders from Storage

When retrieving a cylinder from storage, the user must employ a suitable hand truck or cart. Handle cylinders carefully. Rough handling, knocks and falls are likely damage the cylinder, valve or other safety devices resulting in leakage. Do not drop cylinders or permit them to strike anything violently. Users must verify that the valve protection cap is in place prior to transporting the cylinder.

Cylinders of toxic or highly toxic compressed gases must have their valve outlets capped or plugged by an approved closure device. Cylinders must be individually secured to the cart using an appropriate restraint such as a chain about the mid body of the cylinder.

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**Cylinder Trolleys**

## V. Empty Cylinders

Cylinders are considered “empty” when a residual positive pressure of 25 psig or less remains in the cylinder. Users must close the valve to prevent air and moisture from being drawn into the cylinder. The cylinder should be marked “empty” and the valve protection cap replaced and the barcode removed. Empty cylinders should be returned to the designated area of the Olin Chemistry Research Wing loading dock. Cylinders are to be secured using the chain assembly. Empty cylinders will be picked up by the vendor on the following business day.



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