

## Gas Cylinders

Cylinders of pressurized gas present hazards. Firstly, the cylinders are very heavy and may cause serious injury, including broken bones, if they fall on someone. Secondly, if the cylinder or the cylinder head is ruptured, the violent release of pressurized gas may turn the cylinder into an unguided missile.

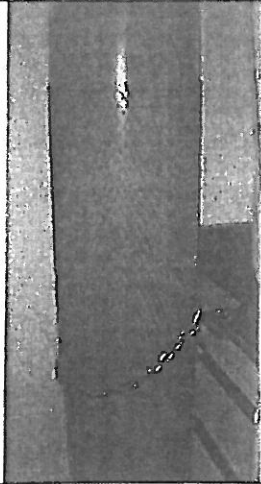
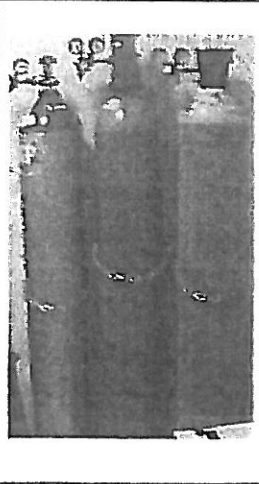
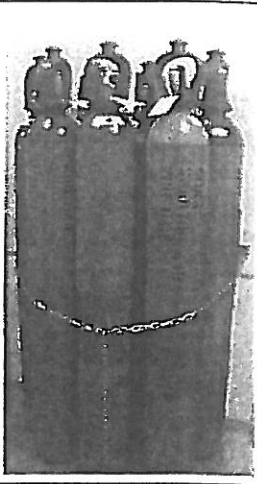

Cylinder accidents and simulations may be seen at:

<http://www.youtube.com/watch?v=X7hOIsBZTPE>

<http://www.youtube.com/watch?v=eJEJGNLT084> (it may be a "lovely sound" but it can kill someone)

<http://www.youtube.com/watch?v=tyINNUaXa8Q&feature=fvwp&NR=1> (these are small cylinders for scuba diving)

Cylinders should be secured at all times. This can be done with wall mounted brackets (provided that the wall is strong enough) or with bench brackets. The brackets should be fitted with strong chains or fabric straps. As a temporary measure (e.g. waiting for brackets to be delivered), a combination of sturdy G-clamps and strong chain may be used. No more than two cylinders may be secured by one chain. Wherever possible, one chain should be used for one cylinder. If installation of a bracket is not possible, a cylinder stand can be used.

			
<p style="text-align: center;">bench bracket</p>	<p style="text-align: center;">wall bracket - correct</p>	<p style="text-align: center;">wall bracket – incorrect (one chain – many cylinders)</p>	<p style="text-align: center;">right</p> <p style="text-align: center;">wrong</p> <p>brackets can be installed at heights suitable for small cylinders. A lab stool is <b>not</b> a suitable restraint.</p>

During transport from the lab or instrument room to or from the store, the cylinder head should be removed and the cylinder cap screwed in place. During transport, the cylinder should be chained into a proper cylinder trolley.

Prepared by

Handwritten signature of Rod Bates in black ink.

Approved by

Handwritten signature in black ink, appearing to be 'S. Baker'.