

Whenever possible: a stopcock installed on a vacuum line should have only a single inlet and a single outlet.

If a split stopcock (one side having 2 or more ports) *is required*, the single port *must* be installed on the *vacuum pump side* of the setup.

As recently demonstrated, connecting the other way around can result in the valve being switched the wrong way, causing the reaction to lose vacuum. If, after this, the reaction vessel is introduced into a cryogenic liquid, this will cause air to be drawn into the flask, possibly interacting with the chemicals and... when the flask is sealed and removed from the cryogen, causing the container to over-pressurize and explode, *injuring the researcher.* 



