

Safety Committee

C. Eugene Bennett Department of Chemistry

Best Practice for Elevator Transport of Asphyxiating Gases

An asphyxiant gas is a nontoxic or minimally toxic gas which can displace the normal oxygen content in breathing air and result in suffocation in the event of a malfunctioning elevator. Examples of such gases include: nitrogen, helium, argon, methane, butane, sulfur hexafluoride, and propane.

Always use freight elevators, when available, to transport hazardous materials in the department. There are two elevators in Clark Hall; the passenger elevator is accessed from the hallway and access to the freight elevator is restricted via a locked door. The freight elevator (not the passenger elevator) in Clark Hall should always be used for the transport of hazardous materials. The Chemistry Research Laboratory Building has one elevator, for both passenger and freight use. The Safety Committee recommends a “buddy system” best practice for transporting asphyxiant gas cylinders and dewars of any size.

To ensure the health and safety of departmental personnel, students, and visitors, the following procedures must be followed when transporting asphyxiating gases via elevator:

1. Carefully plan the transport operation to ensure that all participants will be present on the scheduled day and time.
2. Wear all appropriate personal protective equipment.
3. Place the properly restrained gas cylinder/dewar in the elevator and ensure that no one is in the elevator with the gas.
4. Position a person at each floor between the initial floor and the final destination to deny entry to all persons between floors.
5. Another person should be ready on the receiving floor to accept the container and move it to its final destination.
6. After ensuring that all participants are in place, the sender should push the button for the desired floor, prevent anyone from entering the elevator, exit the elevator before the doors close, and remain outside of the elevator while the doors close.

-The Bennett Department of Chemistry Safety Committee is dedicated to promoting a culture of safety by providing exceptional leadership and partnering with all members of the department.

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