

Dry Ice Safety Tips



Many years ago I worked in a lab that often received dry ice in boxes with our blood product deliveries. The habit in the lab was to dump the excess frozen carbon dioxide into one of our stainless steel sinks. The staff would get excited each time there was a delivery because they liked to run tap water onto the ice to make a “waterfall” of smoke flow onto the floor when they were bored. Before too long, this repeated incorrect placement of dry ice resulted in severe damage to the sink and pipes below. The stainless steel basin cracked and the sink fell down onto the broken pipes below. That particular plumbing is not designed to handle such a low temperature, and the repair was not cheap. Luckily, no one was injured.

- Dry ice sublimates at room temperature. That means it transforms from a solid state directly into a gas. Too much of this gas in a small space will reduce the normal oxygen levels in the area potentially causing dizziness and asphyxiation. Letting dry ice sublimate in the work place is a dangerous practice. If you have dry ice to dispose of, the best practice is to set it outside (where other could not have access to it) so it can dissipate into the open air.
- Dry ice is often used in the transport of specimens, blood products, and certain lab reagents. The Department of Transportation considers it a dangerous good, and it must be used and labeled specifically if it is to be shipped by land or by air. If dry ice is used in shipping, an additional Class 9 miscellaneous hazard label also must go to the right of the Class 6.2 infectious substance label. In addition to the Class 9 label, the outer box must be labeled with the net quantity of dry ice used.
- Another common use of dry ice is with the transport of outreach or clinic lab samples in courier vehicles. Dry ice may be placed in a cooler in the courier vehicle, and samples are placed until delivery to the reference laboratory. Be sure couriers have complete safety training, including training for the proper handling of dry ice. Couriers should limit the amount of dry ice placed inside the cooler that will rest in the vehicle. No more than three pounds of dry ice should ever be placed in that cooler. The cooler should never be completely sealed (remember the ice sublimates to gas, and the volume of the gas in the cooler will expand). Also, if dry ice is kept inside of a vehicle, the windows should be left opened, even a tiny bit. There have been incidents where too much dry ice in a closed vehicle has caused a driver to become dizzy or even become unconscious.