

LDEO LAB SAFETY GRAM

05/07/2013—Recently, a Lamont Post-Doc suffered a cryogenic burn to his finger as he was exposed to liquid nitrogen. This dangerous condition occurred when the gas cylinder dispenser valve could not be fully turned off. Consequently, the liquid nitrogen needed to be collected in containers to prevent it from flowing onto the floor. The lab containers used to collect the liquid were small dewars and they readily filled to the top. As the full container was being changed out a small amount of liquid nitrogen sloshed over the top and onto the individual's gloved hand. Unfortunately, cryogenic rated gloves were **not** being used and the liquid nitrogen was able to pass through the glove, contacting the person's finger, causing a significant burn.

LESSONS LEARNED:

Proper personal protective equipment (PPE) needs to be worn while handling cryogenic liquids. Specifically, when dispensing cryogenic liquids into dewar containers the proper PPE to be used is: Face Shield, Water-Proof Cryogenic rated Gloves (preferably mid-arm length) and a Water-Proof Cryogenic rated Apron.

(*NOTE: Cryogenic rated apparel that are Water-Proof will have a WP on the product tag; non-WP apparel are for cryogenic solids like dry ice and are not rated for liquid.*)

Also, if you are working with cryogenic cylinders, you need to be familiar with how the cylinder operates and the safety mechanisms that are inherent in the unit. The Safety Office has developed and will soon post a set of instructions on the operation of the cryogenic cylinders which are commonly found at LDEO. To help ensure that these procedures are understood, we will be setting up another training session by Tech Air , the LDEO vendor on how to safely operate such cylinders and what to do if one encounters similar problems. Importantly, Lab personnel should ensure that they have the proper PPE before handling cryogenic liquids. As is the case for whenever PPE is needed, it is the responsibility of the Lab PI to provide the particular PPE.