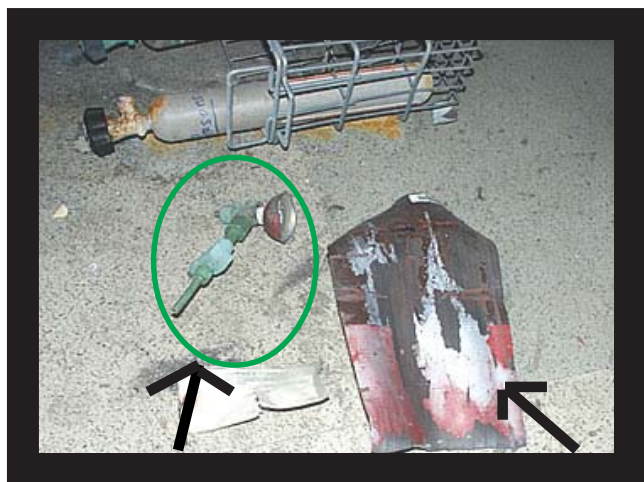


HF LECTURE BOTTLE EXPLOSION

Recently an old gas lecture bottle cylinder of anhydrous hydrogen fluoride spontaneously exploded within a gas cabinet in the Chemistry building. Thankfully, no one was injured because no one was nearby. However, given the extensive damage to the lab, it is likely that anyone present would have been seriously injured from flying debris and/or HF exposure. The explosion also resulted in the building being locked down for about 12 hours by the Fire Department.

The pictures show the remains of the lecture bottle (EX.1) and a shelf about 10 feet away where the heavy-duty window from the gas cabinet can be seen after it was hurled (EX.2).

Anhydrous hydrogen fluoride (or hydrogen bromide) in carbon steel cylinders may react slowly over years with the iron in the steel to form iron fluoride and hydrogen. The hydrogen pressure can ultimately build to the point where it ruptures the cylinder. All corrosive gases should be used up or returned within two years of purchase.



Ex.1 Cylinder top and blown apart lecture bottle



Ex.2 Window frame and glass debris