

Cryogenic Temperatures

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There are very cold temperatures all over the world. Like liquid nitrogen or dry ice. Or just think of the ice in your own freezer.

Dry ice is a very cold substance. Dry ice measures from -70 degrees. The cool thing about dry ice is the fact that it sublimates which means dry ice gives off a gas as it melts. So the more gaseous you see, the faster the dry ice is sublimating. If you were to trap the gas from dry ice and then freeze it in liquid nitrogen, then the gas would become dry ice again.

Liquid nitrogen is 291 degrees below the coldest point on earth. Liquid nitrogen measures at -320 degrees. What would happen if you had a tube with a cork at one end and a valve at the other end? Well if you poured liquid nitrogen inside, shut the valve, and pointed the cork away, then the cork would shoot out. Why does this happen? It happens because the pressure from the gas, coming from the evaporated liquid nitrogen, is pushing the cork so it can get out.

If you put a balloon full of air in liquid nitrogen, what would happen? Well the balloon would shrink. This happens because the air molecules in the balloon become denser. Liquid nitrogen is fun and interesting like if you put a rose in the liquid nitrogen, the rose would freeze. The same thing would happen to a pickle. The most interesting test was the battery. The battery was connected to a light and then put into liquid nitrogen. If the battery was left in the liquid nitrogen long enough the light went off. This happens because the liquid nitrogen is so cold it slows down the molecules and makes them stop.

This was a very interesting and educational experience. I really learned a lot. I hope you get to see this presentation.



^^Liquid Nitrogen.^^