**Making and Classifying Observations***Dihydrogen monoxide*

**Part A:** *Read the article below and fill in the table at the end based on the article.*

**BAN DIHYDROGEN MONOXIDE - THE INVISIBLE KILLER!**

Dihydrogen monoxide (DHMO) is colorless, odorless, tasteless, and kills uncounted thousands of people every year. Most of these deaths are caused by accidental inhalation of DHMO, but the dangers of dihydrogen monoxide do not end there. Prolonged exposure to its solid form causes severe tissue damage. Symptoms of DHMO ingestion can include excessive sweating and urination, and possibly a bloated feeling, nausea, vomiting and body electrolyte imbalance. For those who have become dependent, DHMO withdrawal means certain death.

Dihydrogen monoxide:

* is also known as hydric acid, and is the major component of acid rain.
* contributes to the *Greenhouse Effect*.
* may cause severe burns.
* contributes to the erosion of our natural landscape.
* accelerates corrosion and rusting of many metals.
* may cause electrical failures and decreased effectiveness of automobile brakes.
* has been found in excised tumors of terminal cancer patients.

**Contamination is reaching epidemic proportions!**

Quantities of dihydrogen monoxide have been found in almost every stream, lake, and reservoir in America today. But the pollution is global, and the contaminant has even been found in Antarctic ice. In the midwest alone DHMO has caused millions of dollars of property damage.

Despite the danger, dihydrogen monoxide is often used:

* as an industrial solvent and coolant.
* in nuclear power plants.
* in the production of styrofoam.
* as a fire retardant.
* in many forms of cruel animal research.
* in the distribution of pesticides. Even after washing, produce remains contaminated by this chemical.
* as an additive in certain *junk-foods* and other food products.

Companies dump waste DHMO into rivers and the ocean, and nothing can be done to stop them because this practice is still legal. The impact on wildlife is extreme, and we cannot afford to ignore it any longer!

THE HORROR MUST BE STOPPED!

The American government has refused to ban the production, distribution, or use of this damaging chemical due to its *importance to the economic health of this nation.* In fact, the navy and other military organizations are conducting experiments with DHMO, and designing multi-billion dollar devices to control and utilize it during warfare situations. Hundreds of military research facilities receive tons of it through a highly sophisticated underground distribution network. Many store large quantities for later use.

IT'S NOT TOO LATE!

Act NOW to prevent further contamination. Find out more about this dangerous chemical. What you don't know CAN hurt you and others throughout the world.

**Is dihydrogen monoxide safe? Why or why not?**

|  |  |
| --- | --- |
| What I read... | What I think... |
|  |  |
|  |  |
|  |  |
|  |  |



**Part B*:*** *Dihydrogen Monoxide Demonstration (Demo)*

**Pre-demo questions:**

1. Categorize the observations below as either qualitative (write QL on the line) or quantitative (write QN on the line).

|  |  |
| --- | --- |
| 1. \_\_\_\_\_ 200 milliliters of HCL
 | 1. \_\_\_\_\_ Smells like apples
 |
| 1. \_\_\_\_\_ Is transparent (see-through)
 | 1. \_\_\_\_\_ 10 grams of magnesium metal
 |

**Pre-Demo Observations:**

|  |  |  |
| --- | --- | --- |
|  | Qualitative Observations | Quantitative Observations |
| #1: \_\_\_\_\_\_\_\_ |  |  |
| #2: \_\_\_\_\_\_\_ |  |  |

**During the Demo Observations:**

|  |  |  |
| --- | --- | --- |
|  | Qualitative Observations | Quantitative Observations |
| #1: \_\_\_\_\_\_\_\_ |  |  |
| #2: \_\_\_\_\_\_\_ |  |  |

**Explanation (making an inference):**

1. Which liquid (A or B) is dihydrogen monoxide? How do you know? Use your observations as evidence for your claim.