

## WEEK 2 Discussion:

### Option 2:

**One of the molecules that is commonly used in healthcare is benzylpenicillin acid which is penicillin. Benzylpenicillin acid is important to the molecule because it treats many bacterial infections. And as well is considered a safe, effective and tolerable antibiotic for most people.**

**An electron configuration determines the number of electrons in an atom that are available to bond to another atom. The formula of penicillin is C<sub>16</sub> H<sub>18</sub> N<sub>2</sub> O<sub>4</sub> S, meaning there's 16 carbon atoms, 18 hydrogen atoms, 2 nitrogen atoms, 4 oxygen atoms and one sulfuric atom.**

**An element that I chose from the periodic table is arsenic. It has 18 valence electrons. It also has 3 orbitals in the p-block section of the periodic table.**

Hello class,

I chose the molecule Li<sub>3</sub>N its mass is 1 gram and the volume is 500 milliliters.

1. With %mass/volume concentration, that tells me how much Li<sub>3</sub>N(Lithium Nitride) is in a solution in this case (500mL).

$$(1\text{g}/500\text{ml}) * 100 = 0.2\%$$

2. Molarity or molar concentration is the number of moles that is a solute per liter of a solution.

With my molecule (Li<sub>3</sub>N) I have to find its weight of it, by added the mass of Lithium and Nitride.

Atomic weight of Lithium(6.941) and Nitrogen (14.007)

$$M = (6.941 * 3) + 14.0067 = 34.829 \text{ g/mol}$$