

## Chem 116

### Cu Lab

#### Correction to my notes

In my notes to the lab, I wrote the Conclusion was .... sample xxxx contains yyy mg copper

I awoke in the middle of the night..... that's wrong !!!!!!!

The conclusion IS: **The concentration of copper Sample xxx is yyy ppm**

ppm (parts per million) is very common way of writing the concentrations of dilute solutions.

a 1 ppm solution is 1 mg solute in 1 kg solution

We assume the density of a dilute solution is the same as the density of water = 1g/mL

therefore,

1 ppm	= 1 mg/L	=	1 µg/mL
1 ppb	= 1 µg/L	=	1 ng/L
1 ppt	= 1 ng/L	=	1 pg/mL

Our research assistant uses the fancy GC/MS in the instrument room is measuring pesticides in food at ppb levels. To give you an idea of ppb: a pinch of salt in 10 tons of potato chips.

John