9/21/00

Started experiment entitled "Determination of Stoichiometry: The Reaction of Hexaaquonickel (II) with Ethylenediamine" today. Measured out 2.63g ← top loading balance of $[Ni(H_2O)_6]^{2+}SO_4^{2-}$ ← (synthetic grade - 9/25/00) in a dry 250mL beaker and added 30mL H_2O. Stirred with glass rod until it dissolved. Added ~10mL of ethanol (absolute). ~~A gr~~ An emerald green solution was obtained, which became slightly cloudy and clarified again when the ~~ethanol~~ solution was ~~added~~ stirred. As a deviant, I did not follow instructions and obtained ~~10mL~~ 10.0mL of 2.0M en ← (ethylenediamine) colorless solution from repipeter. When this was slowly added to the green Ni complex solution with stirring, the clear solution changed color to royal blue, then midnight blue, then ~~lavender~~ plum-colored ~~peuce~~ puce Ni. Set beaker aside for 15 minutes.

$$2.63\text{ g } [Ni(H_2O)_6]SO_4 \times \frac{1\text{ mol } [Ni(H_2O)_6]SO_4}{262.8_{56}\text{ g } [Ni(H_2O)_6]SO_4} \times \frac{1\text{ mol Ni}}{1\text{ mol } [Ni(H_2O)_6]SO_4}$$

$$= 0.0100_{055}\text{ mol Ni}$$

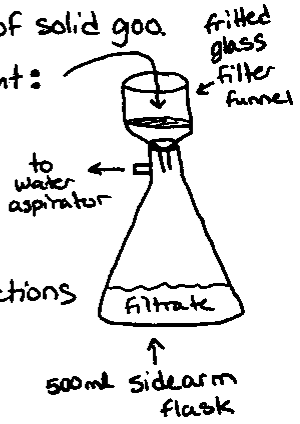
$$= \text{mol of Ni in solution}$$

1 Ni x 58.70 = 58.70
12 H x 1.008 = 12.096
10 O x 16.00 = 160.0
1 S x 32.06 = 32.06
262.8_{56} g/mol

$$2.0\text{ M en} \times \cancel{20}\ 10.0\cancel{\text{mL soln}} \times \frac{1\text{ mol}/\cancel{L\text{ soln}}}{1\text{ M}} \times \frac{1\cancel{L}}{1000\cancel{mL}} = 0.020\text{ mol en}$$

~~Ratio~~ Ratio: $\frac{\text{moles of en}}{\text{mole of Ni}} = \frac{0.020\text{ mol}}{0.0100_{055}\text{ mol}} = 1.9_{99} = 2.0$

Added 30mL more ethanol to ~~lavender~~ pewee plum-colored solution, it turned light lavender, became cloudy, and then some solid goo started to appear. Set aside for 10 more minutes, at the end of which there was a lot of solid goo. Transferred this mixture to the apparatus shown at right: The solid stayed in the funnel, and a blue filtrate came through the filter very slowly. This stuff took forever to filter, and eventually ~~g~~ clogged up the filter. I guess that's why the ~~instr~~ instructions called for a ~~2:1 - 3:~~ 4:1 or 1:1 en:Ni ratio. Disposed of solid in Ni waste, filtrate down sink.



4/3/02 ← Date each entry

number every page → (2)

← be explicit about who's ~~involved~~ involved

Today ~~we~~ Sara (Schwartz) and I plan to ~~determi~~ cut down the largest tree in the forest with a herring. This will not be easy. Sara went off to catch the herring while I went to find the tree. The forest in question today is the upper arb. I found a very large tree just about 50m SSE of the Dean's house. According to my cotton tape measure, it is 341.3cm in circumference at my waist. Circumference = ~~2~~ $\pi D = 2\pi r$

Radius of tree = $r = \frac{\text{~~341~~ Circumference}}{2\pi} = \frac{341.3\text{ cm}}{2\pi} = 54.3_2\text{ cm}$

~~I wit~~ I began a systematic scan of the arb for bigger...

If you make a mistake, cross it out with a single line so the original is still legible, then write the replacement

[4/8/02 ← fresh water type]

← Leave space between lines in case you need to add something

(color commentary is fine)

(write in first person when talking about yourself)

(Don't say "we" did something if you can be more ~~precise~~ precise. In your lab book, write down what you did, and enough detail about who your partners are and what role they played that given all their books, you can make some sense of it.)

[4/8/02 on the Carleton campus]

white pine

I think it is dead - no sap, no needles

[4/8/02: may have been more like 100m]

← 117 cm above the ground

← the .3 I am not sure about

(use past tense, generally - not a rigid rule, but try to stick to it in describing what you did, i.e. in your running account.)

Later [4/8/02 There's a lot more in here I didn't write on this sample page - several paragraphs of hopeless bludgeoning of the tree with said fish.]

Exhausted, we went to bed.

4/4/02

↑ comments added after the fact should be clearly delineated as such

I awoke this morning with a great (?) idea. Perhaps if we dip the herring in liquid nitrogen, it will become hard ~~enough~~ enough to cut the