

Today, Aug 29 : Sect 2.1-2.5

cut out flashcards and start memorizing

Friday, Aug 31 : Sect 2.10-2.12

Conservation of matter experiment / definite composition:

cinnabar (red) $\xrightarrow{\text{heat}}$ mercury

5.00g Cinnabar \rightarrow 4.63g Hg

7.00g Cinnabar \rightarrow 6.48g Hg

27.00g Cinnabar \rightarrow 25.00g Hg

} makes 93%

Formula of Cinnabar: HgO

• another experiment:

color:	Copper oxide #1 (brick)	Copper oxide #2 (black)
	79.9% Cu	88.8% Cu
	20.1% O	11.2% O
	$\frac{\% \text{Cu}}{\% \text{O}} = 3.98$	$\frac{\% \text{Cu}}{\% \text{O}} = 7.93$

$$\frac{3.98}{7.93} = .502$$

you will end with a ratio of small whole numbers

(law of multiple proportions)

\hookrightarrow lead to use of formulas

~~Compound 1~~
~~3.60g A~~
~~1.00g B~~

~~Compound 2~~
Iron experiment
instead

1. These are the 51 elements for which you should know name and atomic symbol (not shown: ${}_{92}\text{U}$). Write the names of the elements with atomic symbols are NOT based on the first one or two letters of the element's name.

1																	2
H																	He
3	4											5	6	7	8	9	10
Li	Be											B	C	N	O	F	Ne
11	12											13	14	15	16	17	18
Na	Mg											Al	Si	P	S	Cl	Ar
19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr
37	38				42				46	47	48		50	51		53	54
Rb	Sr				Mo				Pd	Ag	Cd		Sn	Sb		I	Xe
55	56				74				78	79	80		82	83			86
Cs	Ba				W				Pt	Au	Hg		Pb	Bi			Rn
87	88																
Fr	Ra																

2. Label this periodic table with (a) lanthanides, (b) actinides, (c) alkaline earth metals, (d) alkali metals, (e) halogens, (f) noble gases, and (g) transition metals. Label Groups 1A – 8A. Lightly shade the non-metals. Write the atomic symbol for the semi-metals. Label Period 1, Period 2, Period 3, Period 4, and Period 5.

Alkali Metals

alkaline Earth metals

transition metals

B family group III

C family group IV

N family group V

O family group VI

halogens group VII

noble gases group VIII

period 1

period 2

period 3

period 4

period 5

period 6

period 7

Metals

non-metals

Semi-metals or metalloids

lanthanides

actinides

* families/groups tend to share physical ~~and~~ properties and chemical properties