

Foundations: Hello My Name is Atom - Chapter 2

I. Definitions

A. Molecules

1. _____ bonded to _____.
2. _____ bonds

B. Salts - _____

1. _____ bonded to _____.
2. Cations = _____.
3. Anions = _____.
4. Oxoanions = _____.
5. Oxoacids = _____.

II. Naming Helps

A. Cations

1. Only _____ are polyatomic cations.
2. Common transition metals with a singular charge:
_____.
3. Non-transition metals with more than one charge:
_____.

B. Anions

1. _____ ones are 3⁻
2. Bi- : add _____ and subtract _____ (same as hydrogen _____).
3. Per- : add _____ and _____.
4. -ite : subtract _____ and _____.
5. Hypo...ite: subtract _____ and _____.
6. Know all the ones on the ion sheet.

C. Ionic Compounds (metals/ions with nonmetals/ions)

1. _____.
2. If anion is _____, replace second element _____.
3. For _____, just name the ion as is.
4. For _____ cations with more _____, use a
_____.
 - a. Alt. names: _____ for the _____ and _____ for the _____.

D. Binary Molecules (_____)

1. Add prefix to _____, except for _____.
2. Add prefix to _____ and replace suffix _____.
3. Molecules with more than 2 elements have common names.

E. Acids

1. If anion ends in _____, use
2. If anion ends in _____, use
3. If anion ends in _____, use

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F. Hydrates

1. Many ionic compounds will have _____ because they are _____.
2. _____.
3. Add the prefix _____ combined with the word _____.
(i.e. pentahydrate)

III. History of Atomic Theory (in one slide)

A. _____:

1. Elements made _____.
2. In chem. rxns, atoms _____.
3. No atom _____.

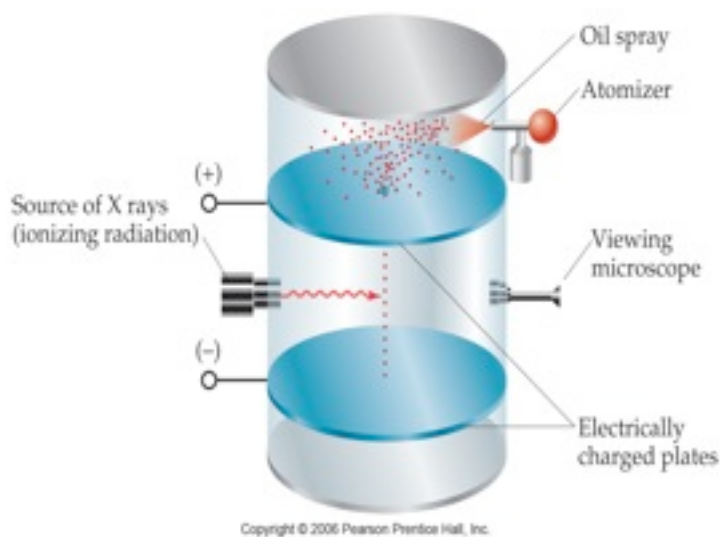
B. Thomson:

C. Millikan:

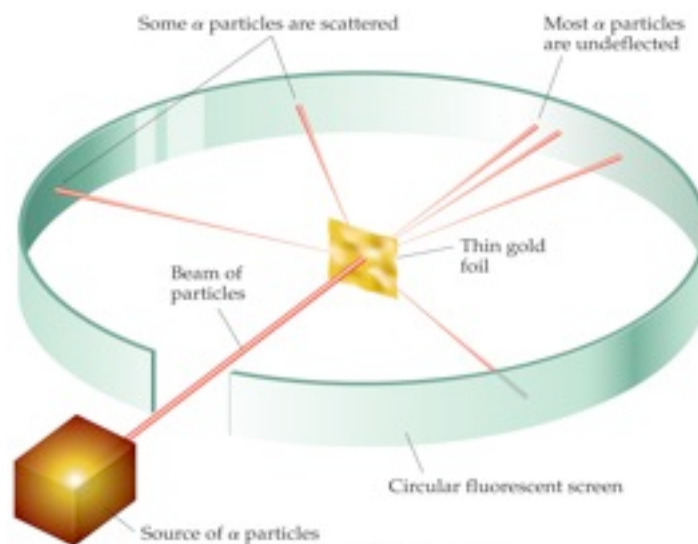
D. Rutherford:



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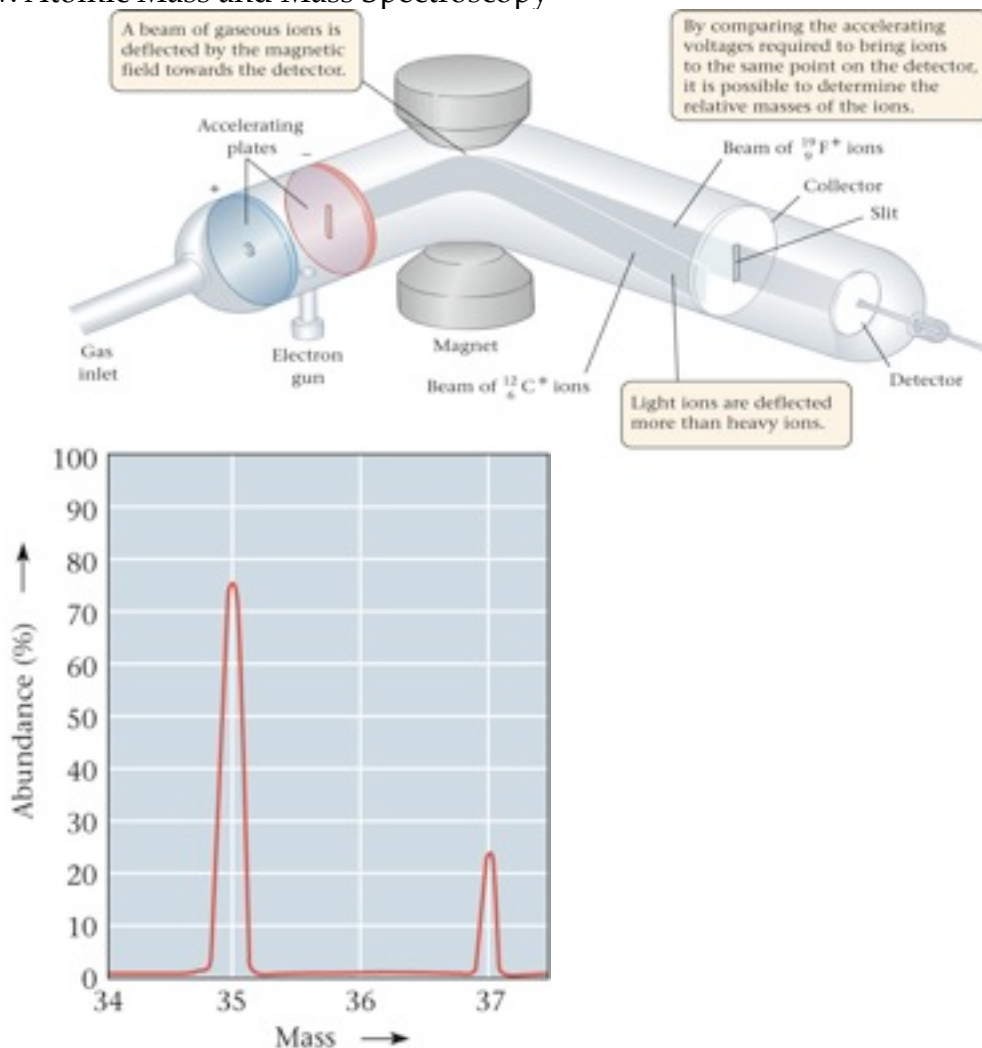
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IV. Atomic Mass and Mass Spectroscopy



- A. The Mass Spec is used _____.
- _____ is used as a standard.
 - The readout states _____ and _____.
 - You can use this to determine _____.
 - avg. atomic mass =
 - r.a. = _____
 - m = _____
 - Units are in _____
 - r.a. can be in _____

V. Atomic and Mass Number

- A.
- B. Atomic # = _____ Mass # = _____ Charge = _____
- C. Isotopes: Same _____, different _____, therefore, atomic # _____.
- D. _____ determines _____ (_____). Light isotopes: _____.
- E. Unstable isotopes _____.