# Binary and Oxyacids

## A. Binary Acids

**a.** only two elements

**b.** one must be hydrogen on the left hand side

**c.** naming:

**i.** prefix – hydro (element name) ic acid

**d.** must be aqueous

**Examples:**

**$HF_{(aq)}$ hydrofluoric acid**

**$H_2S_{(aq)}$ hydrosulfuric acid**

**$HI_{(aq)}$ hydroiodic acid**

**$HBr_{(aq)}$ hydrobromic acid**

## B. Oxyacids

**a.** more than two elements

**b.** one must be hydrogen on the left hand side and a polyatomic ion

**c.** naming:

**i.** name the polyatomic ion

**ii.** replace **ate** with **ic**, **ite** with **ous**

**iii.** change non-metal root for pronunciation

**iv.** add "acid" to the name

**d.** state does not matter

**Examples:**

$H_2SO_3$

i. sulphite
ii. sulphous
iii. sulphurous
iv. sulphurous acid

$H_3PO_4$ phosphoric acid

$H_2SO_4$ sulphuric acid

$H_2CO_3$ carbonic acid

$HClO_3$ chloric acid

$HNO_3$ nitric acid