Predicting Single Replacement Reactions

An Activity Series

A useful tool for determining whether a chemical reaction will take place and for determining the result of a single replacement reaction.

Most active

Least active

- Lithium
- Rubidium
- Potassium
- Calcium
- Sodium
- Manganese
- Zinc
- Iron
- Nickel
- Tin
- Lead
- Copper
- Silver
- Platinum
- Gold

best giver

worst giver

Most active

Least active

- Fluorine
- Chlorine
- Bromine
- Iodine

best taker

worst taker

Most active

Lithium
Rubidium
Potassium
Calcium
Sodium
Manganese
Zinc
Iron
Nickel
Tin
Lead
Copper
Silver
Platinum
Gold

Least active

Most active

Fluorine
Chlorine
Bromine
Iodine

Least active

$$\overset{0}{Cu} + \overset{+1}{2AgNO_3} \longrightarrow \overset{+2}{Cu(NO_3)_2} + \overset{0}{2Ag}$$

Most active

Least active

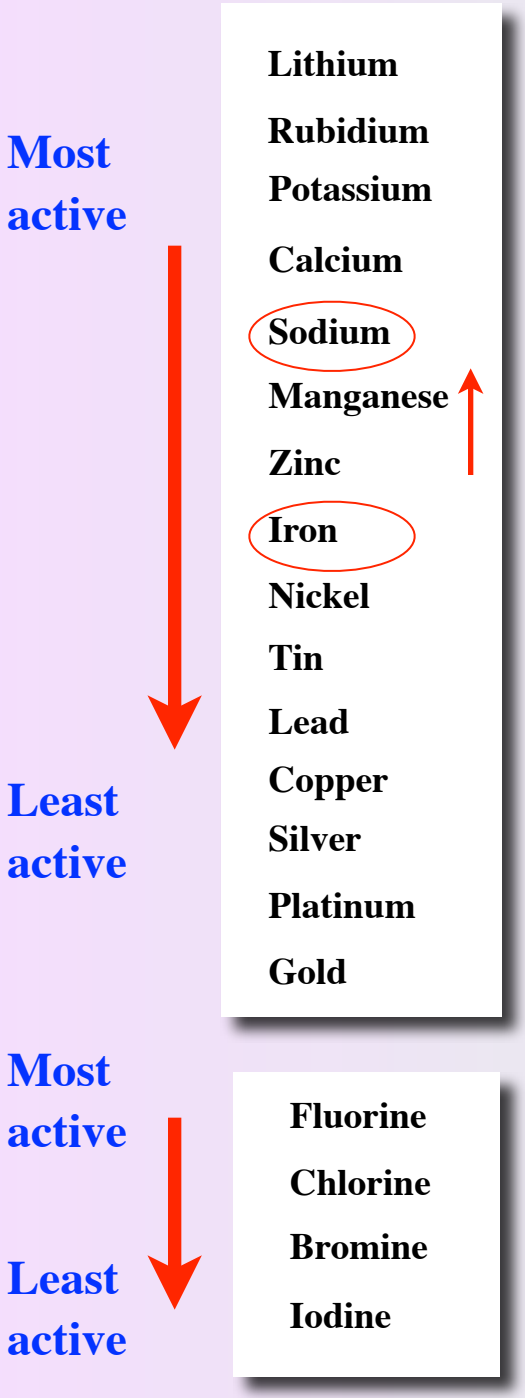
- Lithium
- Rubidium
- Potassium
- Calcium
- Sodium
- Manganese
- Zinc
- Iron
- Nickel
- Tin
- Lead
- Copper
- Silver
- Platinum
- Gold

$$\overset{0}{F_2} + \overset{-1}{2NaBr} \longrightarrow \overset{-1}{2NaF} + \overset{0}{Br_2}$$

Most active

Least active

- Fluorine
- Chlorine
- Bromine
- Iodine



$$\overset{0}{Fe} + \overset{+1}{Na_2SO_4}$$

No reaction