Extraction of Metal from ore

Ore + gangue

Concentration of Ore Removal of gangue particles	Based on difference in physical properties of gangue and ore Hydraulic washing, magnetic separation, froth flotation

Ore

Conversion to oxide	Calcination : Heating carbonate/ bicarbonate ores in absence or limited supply of air Roasting :heating sulphide ores in presence of air

Metal Oxide

Reduction	Metal with high reactivity : electrolytic reduction Metal with moderate reactivity: readuction using reducing agent Metal with low reactivity: self reduction by heating

Metal (Impure)

Purification or Refining	Electrolytic refining (most widely used)

Pure Metal