

# Appendix 5: Units

## MKS Units

Ampere (Unit of current) = fundamental MKSA unit

Coulomb (Unit of charge) = Ampere second

Farad (Unit of capacitance) = Coulomb Volt<sup>-1</sup> = Joule Volt<sup>-2</sup>

Henry (Unit of inductance) = Weber Ampere<sup>-1</sup> = Tesla meter<sup>2</sup> Ampere<sup>-1</sup>

Joule (Unit of energy) = Newton meter = kilogram meter<sup>2</sup> second<sup>-2</sup>

Kelvin (Unit of temperature) = fundamental MKSA unit

kilogram (Unit of mass) = fundamental MKSA unit

meter (Unit of length) = fundamental MKSA unit

Newton (Unit of force) = kilogram meter second<sup>-2</sup>

Ohm (Unit of resistance) = Volt Ampere<sup>-1</sup> = Volt<sup>2</sup> Joule<sup>-1</sup> second<sup>1</sup>

Pascal (Unit of pressure) = Newton meter<sup>-2</sup>

second (Unit of time) = fundamental MKSA unit

Siemens (Unit of conductance) = Ampere Volt<sup>-1</sup> = Joule second Volt<sup>-2</sup>

Tesla (Unit of magnetic field) = Newton Ampere<sup>-1</sup> meter<sup>-1</sup> = Joule Ampere<sup>-1</sup> meter<sup>-2</sup> = Volt second meter<sup>-2</sup>

Volt (Unit of potential) = Joule coulomb<sup>-1</sup>

Watt (Unit of power) = Ampere Volt = Joule second<sup>-1</sup>

Weber (Unit of magnetic flux) = Tesla meter<sup>2</sup> = Volt second

## non-MKS Units

Electron Volt (Unit of energy) =  $1.602 \times 10^{-19}$  Joule

moles/liter (Unit of concentration) =  $6.022 \times 10^{20}$  cm<sup>-3</sup>