

Typical Values - *To be developed in both style and content !*

General Values

Density of water:

Volume of 1 cm³ of water has a mass of 1 g = 1.0 g cm⁻³ = 1.0×10³ kg m⁻³

Atomic Scale

Radii of atoms have an 'order of magnitude' ~ 100 pm = 100×10⁻¹² m = 1.0×10⁻¹⁰ m
Range of atom radii ~ 25 pm (H) to 260 pm (Cs)

Electromagnetic Radiation

Wavelength of visible light:

Between about 390 nm (violet) to 750 nm (red)

Analytical IR ranges:

Near IR: Wavelength: 1 to 2.5 μm, Wavenumber: 10,000 to 4,000 cm⁻¹

Mid IR: Wavelength: 2.5 to 25 μm, Wavenumber: 4,000 to 400 cm⁻¹

Far IR: Wavelength: > 25 μm, Wavenumber: < 400 cm⁻¹

Conversion of Units:

$$1.0 \text{ g cm}^{-3} = 1.0 \times 10^3 \text{ kg m}^{-3}$$

$$\text{Wavenumber, } \sigma \text{ (cm}^{-1}\text{)} = 1/\lambda(\text{cm})$$