

Beer's Law

- The light absorbed by a solution is directly proportional to its concentration.

$A = abc$ Absorbance is unitless

a is the "molar absorptivity, depends on λ , compound, in units of $M^{-1} \text{ cm}^{-1}$

b = path length = 1 cm

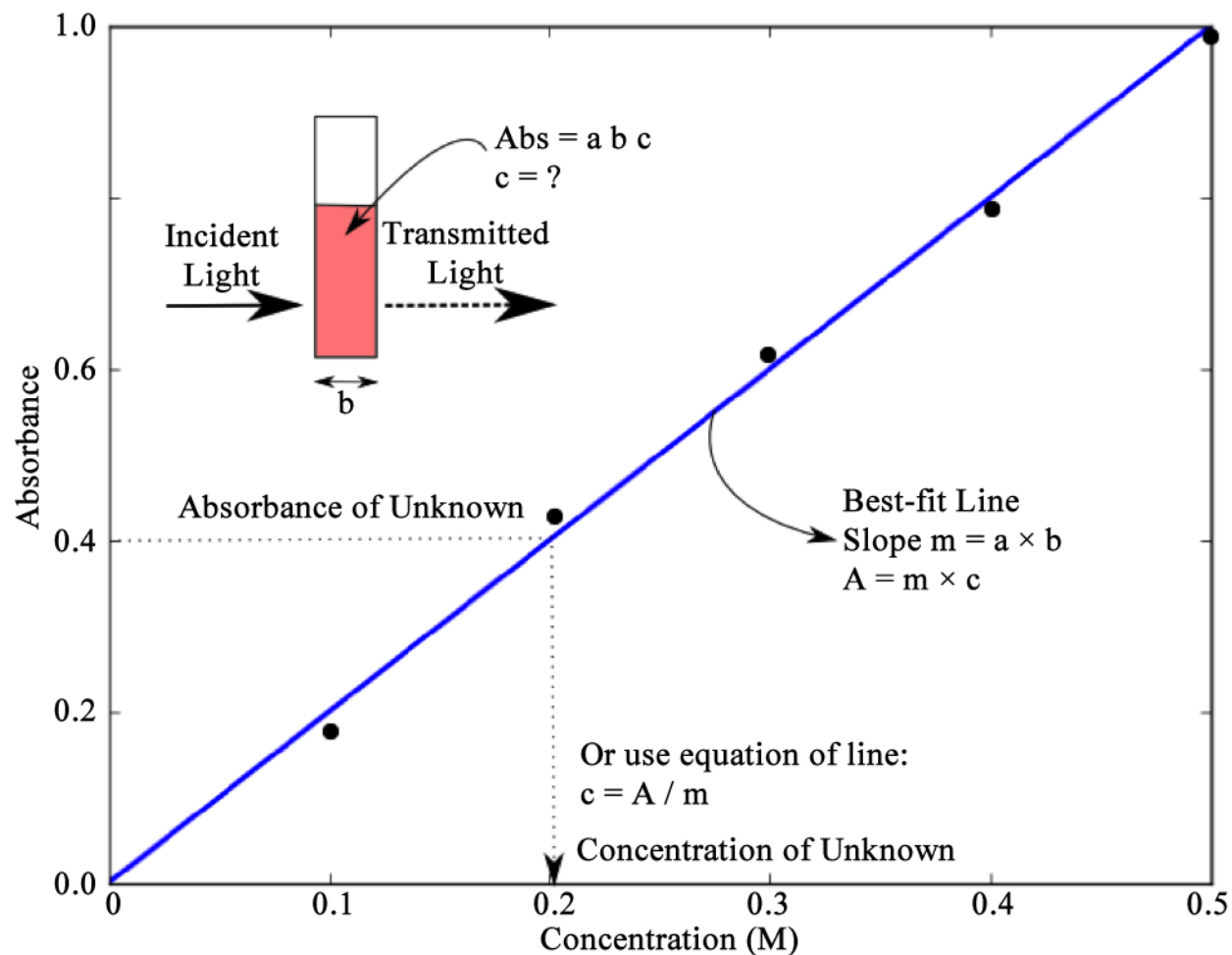
c = concentration in M

Practical use:

Make calibration curve from standard solutions of known concentrations:

$A = mc$

m = slope of best fit line = $a b$ (units of M^{-1})



Concentration of unknown solution can be obtained from plot or from equation of line (see above).