

# Optical Density of DNA

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## Concentration

At 260nm 1 OD = 50ug/ml = 0.05ug/ul.

Using this and the known dilution of your DNA =  $\frac{\text{Volume of Water (ul)}}{\text{Volume of DNA(ul)}}$  you can calculate the conversion factor (Z).

$$\frac{\text{Volume of Water (ul)}}{\text{Volume of DNA(ul)}} \times 0.05 = Z$$

Using the OD reading from your diluted sample and multiplying it by (Z) thus gives you the concentration of DNA in your original sample.

$$\text{OD} \times Z = \text{DNA concentration (ug/ul)}$$

## Purity

Note the OD value at 260nm and 280nm

Divide the values 260/280.

Pure DNA will be 1.8 (-2.0)