

Detection of cardiovascular disease associated miR-29a using paper-based microfluidics and surface enhanced Raman scattering - ESI

Calculation of miR-29a-3p mass and concentration

The exact molecular weight of miR-29a-3p is calculated using the Thermofisher DNA and RNA molecular weights and conversion webpage

(<https://www.thermofisher.com/uk/en/home/references/ambion-tech-support/rna-tools-and-calculators/dna-and-rna-molecular-weights-and-conversions.html>)

The equation is written below (valid at physiological pH)

$$M.W. = (A_n \times 329.2) + (U_n \times 306.2) + (C_n \times 305.2) + (G_n \times 345.2)$$

An, Un, Cn and Gn are the number of each respective nucleotide within the polynucleotide

The M.W. for the 22 base miR-29-3p sequence (UAGCACCAUCUGAAAACGGUUA) is 7048.4 g/mol