Nucleic Acid Molecular Weight Conversion

Exact M.W. of ssRNA (e.g. RNA Transcript)

M.W.=(A_n x 328.2) + (U_n x 305.2) + (C_n x 304.2) + (G_n x 344.2) + 159

A_n, U_n, C_n, and G_n are the number of each respective nucleotide within the polynucleotide.

Exact M.W. of ssDNA (e.g. oligonucleotide)

M.W.=(A_n x 331.2) + (T_n x 287.2) + (C_n x 288.2) + (G_n x 328.2) +79.0

Approximate Nucleic Acids M.W.'s:

M.W. of ssRNA = (# of nucleotides x 320.5) + 159.0
M.W. of ssDNA = (# of nucleotides x 303.7) + 79.0
M.W. of dsDNA = (# of nucleotides x 607.4) + 157.9

Absorbance Units to Nucleic Acid Concencentration Conversion

1 A_{260} dsDNA = 50 µg/ml
1 A_{260} ssDNA = 37 µg/ml
1 A_{260} ssRNA = 40 µg/ml

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