

Protein Quantitation

The protein content of the samples assayed for the Isolation and Characterization of Wheat Germ Acid Phosphatase will be determined spectrophotometrically by the Warburg-Christian method. This is an approximate method that allows the conversion of the corrected A_{280} of a solution to be converted into protein concentration in units of mg/mL. The correction factor is associated with nucleic acid content as evaluated by the A_{260} value of the same solution. The conversion factor for corrected absorbance to protein concentration is 1AU/(1 mg/mL protein). A Table containing A_{280}/A_{260} ratios, correction factors and %nucleic acids is provided below. To obtain the protein concentration of a particular sample, multiply the value of the associated A_{280} by the correction factor to obtain the value in units of mg/mL.

A_{280}/A_{260}	Correction Factor	% Nucleic Acid
1.75	1.12	0
1.63	1.08	0.25
1.52	1.05	0.50
1.4	1.02	0.75
1.36	0.99	1.00
1.30	0.97	1.25
1.25	0.94	1.50
1.16	0.90	2.00
1.09	0.85	2.50
1.03	0.81	3.00
0.98	0.78	3.50
0.94	0.74	4.00
0.87	0.68	5.00
0.85	0.66	5.50
0.82	0.63	6.00
0.80	0.61	6.50
0.78	0.59	7.00
0.77	0.57	7.50
0.75	0.55	8.00
0.73	0.51	9.00
0.71	0.48	10.0
0.67	0.42	12.0
0.64	0.38	14.0
0.62	0.32	17.0
0.60	0.29	20.0