

## Measurement of Total Protein by a Spectrophotometer

### Question

Using a spectrophotometer, you determine the total protein concentration of a sample. The only standard you have is bovine serum albumin (BSA). The absorbance of the sample is 0.45. The absorbance of the standard is 0.35. What is the total protein concentration of the sample?

### Table

Standard	Concentration (mg/ml)	Absorbance
BSA	1.0	0.35
BSA	2.0	0.70
BSA	3.0	1.05
BSA	4.0	1.40
BSA	5.0	1.75
BSA	6.0	2.10
BSA	7.0	2.45
BSA	8.0	2.80
BSA	9.0	3.15
BSA	10.0	3.50
Sample	Unknown	0.45

### Answer and Explanation