

Since all experimental techniques are subject to error, it is usually better to determine the light absorbance for several known ("standard") solutions of known concentration rather than relying on the accuracy of one known (standard) solution alone and "plugging" that number into the Beer's Law Equation above.

If a graph is made by plotting the light absorbance of these standard solutions on the y-axis versus their known concentrations on the x-axis, this is called a Standard Curve. When drawing the graph, a straight line is drawn which best fits the points to average the errors inherent in each measurement.

For example, the chart below shows 4 solutions with different concentrations, and their respective light absorbances measured using a spectrophotometer:

Concentration	Light Absorbance
30 mg%	0.25
50 mg%	0.38
60 mg%	0.41
70 mg%	0.57

Note: mg% = mg/100 ml = mg/dL

This data is presented as a graph below. Notice how a straight line is drawn, beginning at the origin (0,0), that best fits all of the points measured.

