

Protein Quantitation Kit

(Catalog #K810-1000; 1000 assays)

I. Introduction:

The Protein Quantification Kit provides a simple and rapid procedure for determining the concentration of protein in solution. The method utilizes an improved Coomassie blue G reagent which forms a blue complex in the presence of protein. The intensity of the blue complex is proportional to the amount of protein in the sample and can be easily measured by spectrophotometer or plate reader at 595 nm.

II. Kit Contents:

Component	K810-1000	Cap Code	Part Number
Protein Assay Solution (5X)	20 ml	NM	K810-1000-1
Protein Standard (1 mg/ml)	1.5 ml	Yellow	K810-1000-2

III. Storage Conditions:

The Protein Assay Solution can be stored at either +4°C or -20°C and protected from light. The BSA standard should be aliquoted after the first thaw and stored at -20°C. All reagents are stable for up to 12 months under proper storage conditions.

IV. Reagent Preparations:

Prepare 1X working solution by diluting the 5X Solution with distilled water. Only prepare enough 1X working solution for a one-day experiment. Allow the solution to reach room temperature before use. The 1X working solution is stable for 24 hr. Left over 1X solution should be discarded.

V. Protein Quantification using 96-well plate:

1. Dilute the Protein Standard (1 mg/ml) as below. Transfer 10 µl diluted standard and diluted samples into duplicate wells in a clear bottom 96 well plate.

No.	Standard (µl)	H ₂ O (µl)	BSA (µg/10 µl)
0	0	50	0
1	5	45	1
2	10	40	2
3	15	35	3
4	20	30	4
5	25	25	5

2. Add 100 µl of 1X working solution into each well that contains the standard and samples. Shake gently to mix. Incubate for 5 min at room temperature.

3. Measure OD at 595 ± 20 nm. The signal is stable for up to 1 hour.

VI. Calculation:

Subtract the blank OD from the standard OD values and plot the OD against standard protein concentrations. Use the standard curve to determine the sample protein concentration.

VII. General Considerations:

- For unknown samples, several dilutions of a sample maybe tested to ensure the O.D. reading is within the standard curve range.
- Protein Assay solution contains acid. Handle with care.

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