Bradford Protein Quantification Kit

（PT002）

Product Overview

The Bradford Protein Quantification Kit is based on the binding of Coomassie Brilliant Blue G-250 to basic and aromatic amino acids in proteins, forming a blue-colored complex. The solution changes from brownish-black to blue, with the absorption maximum shifting from 456 nm to 595 nm. The color intensity is directly proportional to the protein concentration, allowing protein quantification by measuring absorbance at 595 nm.

Components

Cat. No.	Product Name	Volume(500 rxns)
PT002-A	Bradford Reagent	100 mL
PT002-B	BSA Standard (5 mg/mL)	1 mL

Storage Conditions

Store Bradford Reagent at 4°C.

Store BSA Standard at −30 to −15°C.

Transport at ≤0°C.

Valid for 12 months.

Precautions

1. The Bradford method is **detergent-sensitive**. Use the BCA Protein Quantification Kit if samples contain detergents.
2. Allow Bradford Reagent to warm to room temperature and mix well before use to improve sensitivity.
3. Complete detection promptly after adding Bradford Reagent to avoid precipitation that affects results.
4. Plastic cuvettes are recommended. If glass or quartz cuvettes are used, clean immediately with 95% ethanol after use.
5. Wear a lab coat and disposable gloves for safe operation.

Experimental Protocol

1. Preparation of BSA Standard Dilution Series

BSA Standard is supplied at 5 mg/mL. Dilute with PBS to 2 mg/mL before use. Prepared standards may be used immediately or stored at −20°C.

Vial	Diluent Volume (μL)	BSA Standard Volume (μL)	Final BSA Concentration (μg/mL)
A	0	100	2000
B	50	150	1500
C	200	200	1000
D	200	200 (from Vial C)	500
E	200	200 (from Vial D)	250
F	200	200 (from Vial E)	125
G	200	0	0（Blank）

Table 1 BSA Standard Preparation (Tube Assay)

Vial	Diluent Volume (μL)	BSA Standard Volume (μL)	Final BSA Concentration (μg/mL)
A	0	20	2000
B	10	30	1500
C	40	40	1000
D	40	40（从 Vial C 中取）	500
E	40	40（从 Vial D 中取）	250
F	40	40（从 Vial E 中取）	125
G	40	0	0（Blank）

Table 2 BSA Standard Preparation (Microplate Assay)

2. Sample Incubation and Detection

1） Tube Assay：Add 30 μL of diluted BSA standards or protein samples (neat or diluted) to labeled tubes. Add 1.5 mL Bradford Reagent, mix thoroughly, and incubate at room temperature for 10 min. Measure absorbance at 595 nm using a spectrophotometer.

2） Microplate Assay：Add 5 μL of diluted BSA standards or protein samples (neat or diluted) to labeled wells of a 96-well plate. Add 250 μL Bradford Reagent, mix well, cover the plate, and incubate at room temperature for 10 min. Measure absorbance at 595 nm using a microplate reader.

3. Standard Curve and Sample Concentration Calculation

Construct a standard curve and calculate the protein concentration of samples. If the calculated concentration is outside the linear range, re-dilute the sample and repeat the assay.