

PROTEIN QUANTITATION

Bradford Assay

The Bradford Reagent can be used to determine the concentration of proteins in solution. The procedure is based on the formation of a complex between the dye, Brilliant Blue G, and proteins in solution. The protein-dye complex causes a shift in the absorption maximum of the dye from 465 to 595 nm. The amount of absorption is proportional to the protein present. The Bradford Reagent requires no dilution and is suitable for micro, multiwell plate, and standard assays. The linear concentration range is 0.1-1.4 mg/ml of protein, using BSA (bovine serum albumin) as the standard protein.

The Bradford Reagent is compatible with reducing agents, which are often used to stabilize proteins in solution. Other protein assay procedures (Lowry and BCA) are not compatible with reducing agents. The Bradford Reagent should be used in place of these protein assays if reducing agents are present. However, the Bradford reagent is only compatible with low concentrations of detergents (see compatibility chart). If the protein sample to be assayed has detergents(s) present in the buffer, it is suggested to use the BCA protein determination procedure.

BRADFORD PROTEIN COMPATIBILITY TABLE

Substance	Amount
CHAPS	0.5%
CHAPSO	0.5%
Nonidet-P-40	0.5%
SDS (lauryl)	0.125%
Triton X-100	0.125%
Triton X-114	0.125%
Tween 20	0.06%
Tween 80	0.06%
Octyl- β -glucoside	0.25%
Ammonium Sulfate	1.0 M
Glycine	0.1 M
HEPES	0.1 M
Sodium azide	0.5%
MES	0.7 M
Sodium acetate	0.2 M
Sodium bicarbonate	0.1 M
Sodium chloride	5.0 M
Sodium phosphate	0.1 M
Tris	2.0 M
DTT	5 mM
Dithioerythritol	1 mM
2-Mercaptoethanol	1 M
EDTA	100 mM
Guanidine HCl	6.0 M
Methanol	10%
Urea	3.0 M
Sodium hydroxide	0.1 M

List of selected substances that are compatible with the Bradford protein assay. The amount listed is the maximum amount of material that may be present in the protein sample without causing interference.

Bradford Reagent

for 1-1,400 μ g/ml protein

This protein assay is based on complexing of proteins with Brilliant Blue G. The protein sample is mixed with the reagent and then read at 595 nm after a short incubation at room temperature.

Features & Benefits

- The reagent is ready to use. No mixing or dilution required
- Color development is rapid. Only a five minute incubation and then the sample is read a 595 nm
- Reducing sugars and reducing substances along with thiols do not interfere with this reagent
- Reagent is suitable for micro (1-10 μ g/ml) and standard (50-1400 μ g/ml) assays
- Can be used in microwell plate assays

Product Code	Description	Size
B 6916	Bradford Reagent	500 mL
F 9252	Folin & Ciocalteu's Phenol Reagent	100 mL 500 mL 1 L
F 9015	Fluorescamine	100 mg 250 mg 1 g
P 2297	Picrylsulfonic Acid Solution	10 mL 5 x 10 mL