



## PROTEIN ASSAYS

# RC DC™ Protein Assay

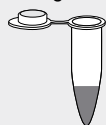
## Quick Guide

### Standard Assay



200–1,500 µg/ml

### Microfuge Tube Assay



200–1,500 µg/ml

Mix reagent S with reagent A in a ratio of 20 µl:1 ml to create desired amount of reagent A'

Pipet standards or samples into test tubes

100 µl

25 µl

Add RC reagent I to each test tube

500 µl

125 µl

Mix and incubate for 1 min at room temperature

Add RC reagent II to each test tube

500 µl

125 µl

Mix and centrifuge for 5 min at 15,000 x g

Discard the supernatant. Allow the liquid to drain completely

Add reagent A' to each test tube

510 µl

127 µl

Mix and incubate for 1 min at room temperature

Add DC reagent B to each test tube

4 ml

1 ml

Mix and incubate for 15 min at room temperature

Measure absorbance at 750 nm; color will be stable for 1 hr

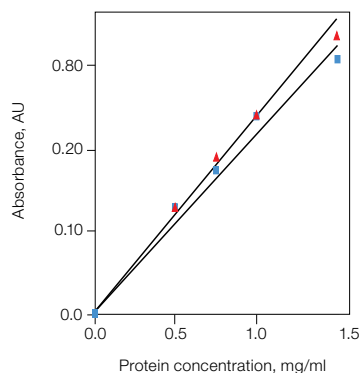
Lowry-based\*; reductant and detergent compatible

Adapted from the method of Lowry. Lowry OH et al. (1951). Protein measurement with the Folin phenol reagent. J Biol Chem 193, 265–275.

### Setting Up a Standard Curve

Determine protein concentration by plotting the absorbance vs. concentration of known standards. Use the resulting curve to determine the concentration of unknown proteins based on their absorbance.

**Note:** The best standard to use is a purified sample of your target protein. If this is not available, use Bio-Rad's bovine serum albumin or bovine  $\gamma$ -globulin to make your standard curve.



**Standard curve generation using known standards.** A typical standard curve for Lowry-based assays, including RC DC Protein Assays. Bovine serum albumin (■); bovine  $\gamma$ -globulin (▲).

### For Best Results

- Run a standard curve with each protein assay
- Run at least 3 replicates of all standards and samples
- Process the sample and standards the same way to ensure that differences in color intensity are due only to differences in protein concentration
- Make sure the sample and standard fall within the same concentration range



## Reagent Compatibility

The following reagents were tested for their compatibility with the protein assay. Concentrations represent maximum concentrations for standard assay. ✓ = compatible.

Reagent	Concentration
CHAPS	2%
Dithiothreitol (DTT)	0.1 M
EDTA	0.1 M
Imidazole	0.5 M
Laemmli buffer	✓
2-Mercaptoethanol	5%
Sodium hydroxide	2.5 M
TBP	0.002 M
Tris , pH 8	0.5 M
Triton X-100	2%
Tween 20	2%

## Ordering Information

Catalog #	Description
5000121	<b>RC DC Protein Assay Kit I, includes RC reagents package, DC protein assay reagents package, bovine <math>\gamma</math>-globulin standard</b>
5000122	<b>RC DC Protein Assay Kit II, includes RC reagents package, DC protein assay reagents package, bovine serum albumin standard</b>

### Microplate Reader

1681130	<b>iMark™ Microplate Absorbance Reader</b>
2240096	<b>Costar 96-Well Flat-Bottom EIA Plate, 100 plates</b>

### Spectrophotometer

1702525	<b>SmartSpec™ Plus Spectrophotometer</b>
1702510	<b>trUView™ Cuvettes, pkg of 50</b>
1702511	<b>trUView Cuvettes, pkg of 100</b>
2239950	<b>Standard Disposable Polystyrene Cuvettes, 3.5 ml, pkg of 100</b>
2239955	<b>Semimicrovolume Disposable Polystyrene Cuvettes, 1.5 ml, pkg of 100</b>
1702502	<b>Standard Cuvette, 1–3.5 ml, quartz</b>
1702503	<b>Semimicrovolume Cuvette, 0.5–1.4 ml, quartz</b>
1702504	<b>Microvolume Cuvette, 200–700 <math>\mu</math>l, quartz</b>
1702505	<b>Submicrovolume Cuvette, 80–150 <math>\mu</math>l, quartz</b>

Visit [bio-rad.com/proteinassaykits](http://bio-rad.com/proteinassaykits) for more information.

Costar is a trademark of Corning Incorporated. Triton is a trademark of Dow Chemical Company. Tween is a trademark of ICI Americas Inc.

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