BCS Assay Kit

Code	Description	Size
N962-500RXN	**BCS Assay Kit**	500 reactions
N962-100RXN	**BCS Assay Kit**	100 reactions
N962-SAMPLE	**BCS Assay Kit**	20 reactions
N962-Q-SAMPLE	**BCS Assay Kit**	20 reactions

General Information

The BCS Assay Kit allows for spectrophotometric determination of protein concentration. The BCS Assay utilizes a biuret-like reaction where Copper (II) binds protein. The remaining free Copper (II) then is reduced to Copper (I), which associates with a dye that changes colors upon binding of copper (I). Protein concentration is then determined by measuring the absorbance of the dye-Copper (I) complex. The signal is inversely proportional to the concentration of peptide bonds as opposed to specific amino acid side chains. Therefore, protein to protein variability is less of a concern. Another advantage of the BCS Assay is that the BCS Assay has a high tolerance for salts, detergents, and buffers that may interfere with conventional protein quantitation kits.

- Reduced variability between protein assays
- High tolerance for salts, detergents and buffers
- Reproducible and consistent results

Storage/Stability

Store room temperature (18 to 26°C).

Product Use Limitations

For research use only. Not for therapeutic or diagnostic use.

Materials Supplied

Component	N962-500RXN	N962-100RXN	N962-SAMPLE
BCS Assay Kit, Solution A	N959-50ML	N959-10ML	N959-2ML
BCS Assay Kit, Solution B	N960-450ML	N960-90ML	N960-18ML

Protocol/Procedure:

Standard Curve/Sample Preparation

1. For optimal results, BSA standards should be prepared in the final storage buffer of the unknown protein preparation.
2. Prepare BSA standards according to the table below.

Standard	Diluent (µL)	20 mg/mL BSA (µL)	Final Concentration (mg/mL)
1	400	0	0
2	396	4	0.2
3	392	8	0.4
4	388	12	0.6
5	384	16	0.8
6	380	20	1

3. Aliquot 50 µL of each standard into a 1.5 mL microcentrifuge tube
   Note: To increase accuracy, standard curve and samples should be aliquoted and measured in triplicate.

4. Aliquot 50 µL of the unknown sample into 1.5 mL microcentrifuge tubes (in triplicate).

Protein Detection

1. Add 100 µL of BCS Assay Kit, Solution A to each sample
2. Briefly vortex to mix
3. Add 900 µL of BCS Assay Kit, Solution B to each sample
4. Briefly vortex to mix
5. Measure the absorbance of each sample at 485 nm against water or a diluent reference.
6. Construct a standard curve by plotting the absorbance of the BSA standards against their respective concentrations. From this graph, the concentration of the unknown protein preparation can be calculated.

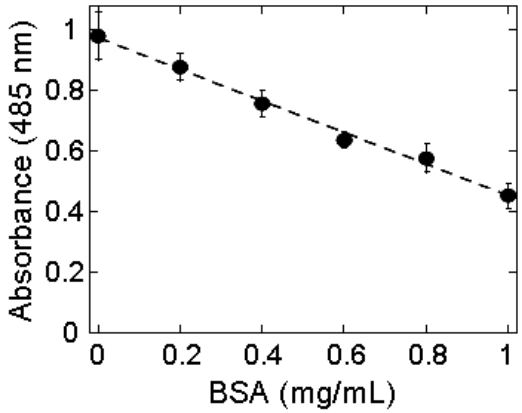

Figure. Representative BSA standard curve. The error bars represent the standard deviation obtained from absorbance of three separate samples for each concentration.

Compound	Concentration
Glycerol	≤ 10% (v/v)
Triton X-100	≤ 1% (v/v)
Tween-20	< 0.2% (v/v)
Nonidet ®P-40 Subtitute	≤ 2% (v/v)
EDTA	≤ 0.1 mM
DTT	≤ 0.3 mM

Table. BCS Assay reagent compatibility. For protein preparation storage buffers containing reagents above the concentrations mentioned, the BSA standards should be prepared with storage buffer. Alternatively, the unknown protein preparation can be diluted to minimize the effects of the reagents mentioned in the table.

Directions for Use

For Technical Support

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