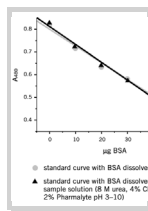


2-D Quant Kit



2-D Quant Kit is designed for the accurate determination of protein concentration in samples prepared for electrophoresis techniques such as 2-D electrophoresis, SDS-PAGE, or IEF.

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- Accurately determine protein concentration in the presence of 2% SDS, 1% DTT, 8 M urea, 2 M thiourea, 4% CHAPS, 2% Pharmalyte, and 2% IPG Buffer.
- Quantitatively precipitates proteins while leaving interfering substances behind.
- Linear response in the range of 0 to 50 µg protein, with recommended sample volumes of 1 to 50 µl.

Common spectrophotometric methods of quantitating protein rely either on Coomassie dye binding or protein-catalyzed reduction of cupric (Cu_{2+}) ion to cuprous (Cu_{+}) ion. Dye-binding assays cannot be used in the presence of any reagent that also binds the dye. This includes carrier ampholytes and detergents such as PlusOne CHAPS, SDS, and Triton X-100. Assays that depend on the reduction of cupric ion cannot be used in the presence of reductants such as DTT, or in the presence of reagents that form complexes with cupric ion, such as thiourea or EDTA.

The 2-D Quant Kit procedure works by quantitatively precipitating proteins while leaving interfering substances behind. The assay is based on the specific binding of copper ions to protein. Precipitated proteins are resuspended in a copper-containing solution and unbound copper is measured with a colorimetric agent. The absorbance at 480 nm is inversely related to the protein concentration. The assay has a linear response to protein in the range of 0 to 50 µg and recommended sample volume is 1 to 50 µl.

Reagents tested for compatibility with the 2-D Quant Kit

Compound Tested : Concentration
SDS : 2% (w/v) CHAPS : 4% (w/v) Triton X-100 : 1% (w/v)
Pharmalyte pH 3-10 : 2% (v/v) IPG Buffer pH 3-10 NL : 2% (v/v) Tris : 50 mM EDTA : 10 mM DTT : 1% (65 mM) 2-Mercaptoethanol : 2% (v/v) Urea : 8 M Thiourea : 2 M Glycerol : 30% (w/v)

Product Specifications

2-D Quant Kit



| Parameter | 2-D Quant Kit |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Sample volume min. | 1 μ l |
| Sample Volume Max. | 50 μ l |
| Assay Conditions | 480 nm 1 h |
| Linearity | 0 - 50 μ g |
| Storage conditions | 2 - 8°C |
| Kit contents | Precipitant 250 ml Co-precipitant 250 ml Copper solution 50 ml Color reagent A 2 x 250 ml Color reagent B 5 ml BSA standard 5 ml (2 mg/ml) |
| Wetted Part | No |
| Guidance | The kit is used for quantitation of protein amount using a colorimetric assay. The kit contains reagents sufficient for 500 individual assays |
| DIGE approved | Y |
| Pack size | 500 assays |