Coomassie Brilliant Blue Sol.

Product	Cat #	Size
Coomassie Blue G-250	IBS-BC005E	1 L
Coomassie Blue G-250	IBS-BC005E-1	5 L
Coomassie Blue R-250 (0.25%)	IBS-BC006AE	1 L
Coomassie Blue R-250	IBS-BC006bE	500 ml
Coomassie Blue R-250	IBS-BC006E	1 L
Coomassie Blue R-250	IBS-BC006E-1	5 L

Components : Coomassie Brilliant Blue R(G)-250 0.05%, Ethanol 50%, Acetic acid 10%

Storage Conditions : It is shipped at ambient temperature. Store it at room temperature, upon arrival. It is stable for 1 year when stored and used properly.

Introduction : Coomassie Brilliant Blue is the name of two similar triphenylmethane dyes that were developed for use in the textile industry but are now commonly used for staining proteins in analytical biochemistry. Coomassie Brilliant Blue G-250 differs from Coomassie Brilliant Blue R-250 by the addition of ethyl groups. The name "Coomassie" is a registered trademark of Imperial Chemical Industries.

Coomassie Brilliant Blue G-250 : The Bradford assay uses the spectral properties of Coomassie Brilliant Blue G-250 to estimate the amount of protein in a solution. A protein sample is added to a solution of the dye in phosphoric acid and ethanol. Under the acid conditions the dye is normally a brownish colour but on binding to the protein the blue form of the dye is produced. The optical absorbance of the solution is measured at a wavelength of 595 nm. On binding to a protein the negatively charged Coomassie Brilliant Blue G-250 dye molecule will give an overall negative charge to the protein. This property can be used to separate proteins or protein complexes using polyacrylamide gel electrophoresis under non-denaturing conditions in a technique called Blue Native PAGE. The mobility of the complex in the polyacrylamide gel will depend on both the size of the protein complex (i.e. the molecular weight) and on the amount of dye bound to the protein.

Coomassie Brilliant Blue R-250 : Coomassie Brilliant Blue R-250 stains protein samples after electrophoretic separation in a polyacrylamide gel. They soaked the gel in a dye solution containing ethanol, acetic acid and water. As the dye stained the polyacrylamide gel as well as the protein, to visualise the protein bands they needed to destain the gel which they did electrophoretically. Subsequent publications reported that polyacrylamide gels could be successfully destained using an acetic acid solution.