Reference

1. Laemmli, U. K., *Nature*, **227**, 680 (1970).

Ordering Information

Catalog Number	Product Description
Prestained Standards	
161-0324	**Kaleidoscope Prestained Standards,** 500 µl
161-0325	**Kaleidoscope Polypeptide Standards,** 500 µl
161-0305	**Prestained SDS-PAGE Standards,** low range, 500 µl
161-0309	**Prestained SDS-PAGE Standards,** high range, 500 µl
161-0318	**Prestained SDS-PAGE Standards,** broad range, 500 µl
Molecular Weight Standards	
161-0326	**Polypeptide SDS-PAGE Standards,** 200 µl
161-0304	**SDS-PAGE Standards,** low range, 200 µl
161-0303	**SDS-PAGE Standards,** high range, 200 µl
161-0317	**SDS-PAGE Standards,** broad range, 200 µl
161-0314	**Silver Stain SDS-PAGE Standards,** low range, 200 µl
161-0315	**Silver Stain SDS-PAGE Standards,** high range, 200 µl
161-0306	**Biotinylated SDS-PAGE Standards,** low range, 250 µl
161-0311	**Biotinylated SDS-PAGE Standards,** high range, 250 µl
161-0319	**Biotinylated SDS-PAGE Standards,** broad range, 250 µl
161-0320	**2-D SDS-PAGE Standards,** 500 µl
IEF Standards	
161-0310	**IEF Standards,** pI range 4.45-9.6, 250 µl

Bio-Rad Laboratories, 2000 Alfred Nobel Dr., Hercules, CA 94547
LIT599 Rev E

Kaleidoscope Prestained Standards

Catalog Number 161-0324

Product shipped at room temperature.
Store at -20 °C upon arrival.

BIO-RAD

Myosin
ß-galactosidase
Bovine serum albumin
Carbonic anhydrase
Soybean trypsin inhibitor
Lysozyme
Aprotinin

Fig. 1. Kaleidoscope Prestained Standards. 5 µl and 10 µl of the standards were run on a 4-20% Ready Gel according to the method of Laemmli.[1] The gels were run on the Mini-PROTEAN® II cell and dried using the Model 583 Gel Dryer.

Fig. 2. Kaleidoscope Prestained Standards and Prestained SDS-PAGE Standards. Prestained standards were run on a 4-20% Ready Gel in the Mini-PROTEAN II cell according to the method of Laemmli.[1] The standards were then electrophoretically transferred to nitrocellulose using a Mini Trans-Blot® cell. **Lane 1**, 5 µl high range Prestained SDS-PAGE Standards; **Lane 2** and **3**, 5 µl Kaleidoscope Prestained Standards; **Lane 4**, 5 µl low range Prestained SDS-PAGE Standards.

Constituent Proteins

(See enclosed insert for lot specific calibrated molecular weights.)[†]

Protein	Protein Color
Myosin	Blue
ß-galactosidase	Magenta
Bovine serum albumin	Green
Carbonic anhydrase	Violet
Soybean trypsin inhibitor	Orange
Lysozyme	Red
Aprotinin	Blue

[†] Covalently bound dye alters the molecular weight of the proteins and produces relatively broad bands. The molecular weights are calibrated from the center of each protein band.

Instructions for Use

Heat the solution to 40 °C for 1 minute to dissolve any solids which may have precipitated at -20 °C. To visualize Kaleidoscope standards after blotting, load 10 µl for full size gels (16-20 cm) and 5 µl for mini gels. To visualize the standards during electrophoresis, load 20 µl for full size gels and 10 µl for mini gels. To see the standards during the run, it is helpful to hold a sheet of white paper behind the gel.

Note: The prestaining of the proteins substantially inhibits them from being further stained with biotin/avidin systems, colloidal gold, Coomassie blue R-250, or amido black. The standards can be silver stained, but silver staining will result in broad bands because of the large amount of protein in the sample.

Bio-Rad's Kaleidoscope Prestained Standards consist of seven uniquely colored proteins with molecular weight range of approximately 200,000–6,500 daltons. Dyes have been covalently attached to the standard proteins and will not dissociate during normal staining or destaining procedures. The proteins are provided in a stable aqueous solution. No reconstitution or further dilution is required before use.

Applications

Bio-Rad's Kaleidoscope standards provide a quick and easy way to assess the quality of an electrophoretic transfer and act as a control in repetitive blotting experiments. Individual bands are easily identified by their unique colors, making it possible to monitor the separation of proteins while electrophoresis is in progress, even after the dye front has run off the gel. The standards can also be used to locate a protein for excision from an unstained preparative gel.

Protein Molecular Weights

The molecular weights of every lot of Kaleidoscope standards are individually calibrated against Bio-Rad's SDS-PAGE Standards. The lot specific calibrated molecular weights are included with every vial. Kaleidoscope standards are useful for estimating the molecular weights of sample proteins, however, for precise molecular weight determinations, use Bio-Rad's SDS-PAGE, Silver Stain, or Biotinylated standards in addition to the prestained standards.

Specifications

Contents	Approximately 1.6 mg total protein in 33% (v/v) glycerol, 3% SDS, 10 mM Tris, pH 7.0, 10 mM DTT, 2 mM EDTA, 0.01% NaN_3
Storage	-20 °C
Shelf life	1 year at -20 °C
Volume	500 µl
Applications per vial	25–100