Ordering Information

Catalog Number	Product Description
Specialty Standards	
161-0310	**IEF Standards,** pI range 4.45-9.6, 250 µl
161-0320	**2-D SDS-PAGE Standards,** 500 µl
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
SDS-PAGE Molecular Weight Standards	
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
161-0326	**Polypeptide Standards,** 200 µl
161-0314	**Silver Stain Standards,** low range, 200 µl
161-0315	**Silver Stain Standards,** high range, 200 µl
161-0306	**Biotinylated Standards,** low range, 250 µl
161-0311	**Biotinylated Standards,** high range, 250 µl
161-0319	**Biotinylated Standards,** broad range, 250 µl

Bio-Rad Laboratories, 2000 Alfred Nobel Dr., Hercules, CA 94547
Phone (510) 741-1000 **LIT396 Rev F**

IEF Standards Instruction Manual

Catalog Number 161-0310
Broad Range pl 4.45-9.6

Product shipped at room temperature.
For research use only.
Store at -20 °C.

BIO-RAD

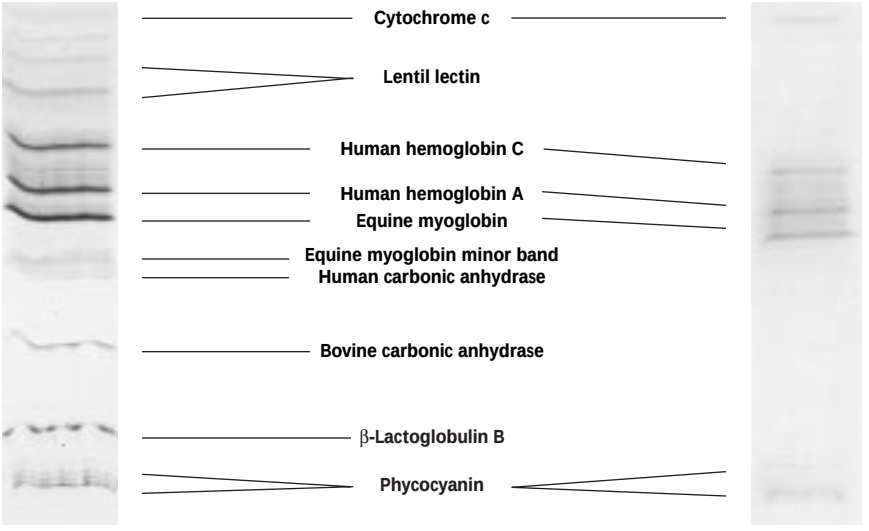

Fig. 1. IEF Standards for accurate p*I* calibration of native IEF gels. A. 5 µl of the standards were run on a horizontal polyacrylamide IEF gel and stained with Coomassie blue R-250 dye and crocein scarlet. **B.** 5 µl of the standards were run on a horizontal polyacrylamide IEF gel and left unstained.

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Introduction

Bio-Rad's IEF Standards, a mixture of nine natural proteins with isoelectric points ranging from 4.45 to 9.6, permit dependable and reproducible p*I* calibration in IEF gels. The mixture is provided in a stable aqueous solution. No reconstitution or dilution is required prior to use. IEF Standards are intended for use in analytical acrylamide or agarose isoelectric focusing gels. Five of the nine proteins are naturally colored to provide continuous monitoring of the focusing process.

Specifications

Contents	Approximately 16.5 mg total protein in 50% glycerol with 0.02% sodium azide
Volume	250 µl
Storage	-20 °C*
Shelf life	1 year at -20 °C
Recommended sample volume	5 µl for Coomassie blue staining (0.5 µl for silver stain)
Applications per vial	50 (500 for silver stain)

* IEF Standards will be shipped at room temperature. They are stable for transportation at this temperature. Store at -20 °C upon arrival. Do not store at -70 °C.

Note: IEF Standards are not recommended for 2-D electrophoresis applications. The proteins are not naturally colored when denatured by urea and subsequent electrophoresis will produce different results than those shown in Figure 1.

Constituent Proteins

	Color	pI	MW
Phycocyanin (3 bands)	Blue	4.45, 4.65, 4.75	232,000
ß-Lactoglobulin B		5.1	18,400
Bovine carbonic anhydrase		6.0	31,000
Human carbonic anhydrase		6.5	28,000
Equine myoglobin (2 bands)	Brown	6.8, 7.0	17,500
Human hemoglobin A	Red	7.1	64,500
Human hemoglobin C	Red	7.5	64,500
Lentil lectin (3 bands)		7.80, 8.00, 8.20	49,000
Cytochrome c	Red	9.6	12,200

Note: The p*I* values given here were determined by direct measurement with a surface pH electrode.

Instructions for Use

IEF Standards can be applied directly to IEF gels without any prior treatment. Use 5 µl for gels which are to be stained with Coomassie blue, and for silver staining, use 0.5 µl or 5 µl of a 1:10 dilution of IEF Standards, using deionized, destilled water as a diluent.