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Product Information

IEF mix 3.6–9.3

Catalog Number **I3018**
Storage Temperature –20 °C

Product Description

Isoelectric Focusing (IEF) is a highly sensitive electrophoretic technique, which separates proteins according to their isoelectric points (pI). IEF provides a degree of resolution not attainable by most other charge separation procedures. This high degree of resolution may also be attained on a preparative scale. A method of pI calibration is necessary in order to fully utilize IEF. Using markers with well-defined isoelectric points, will give an estimate of the pI of a protein sample.

IEF mix 3.6–9.3 is a mixture of proteins with well-defined pI values. The protein mixture forms evenly spaced, distinct bands over the designated pH range. To ensure stability, the markers are lyophilized and stored at –20 °C.

IEF mix 3.6–9.3 is satisfactory for use on a flat bed apparatus with ampholytes and Pharmalyte®. The markers have not been qualified for use in gels containing urea. Preliminary trials may be necessary for use with other systems.

Components

Each vial contains ~3 mg of a mixture of the marker proteins and ~25 mg of trehalose and 25 mg of mannitol. The eight proteins produce 10–11 bands on IEF (non-urea).

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

1. Reconstitute the vial with 250 µl of deionized water to obtain a solution containing 12 mg/ml of total protein, 10% (w/v) trehalose, and 10% (w/v) mannitol.

2. Allow 5 minutes for the protein markers to completely dissolve after reconstitution.

Protein	Approximate pI
Amyloglucosidase from *Aspergillus niger*	3.6
Trypsin Inhibitor from *Glycine max* (soybean)	4.6
β-Lactoglobulin A from bovine milk	5.1
Carbonic Anhydrase Isozyme II from bovine erythrocytes	5.9
Carbonic Anhydrase Isozyme I from human erythrocytes	6.6
Myoglobin from equine heart	Minor Band 6.8 Major Band 7.2
Lectin from *Lens culinaris* (lentil)	8.2, 8.6, 8.8
Trypsinogen from bovine pancreas	9.3

Storage/Stability

Store the lyophilized product at –20 °C with desiccant.

Procedure

1. Use 10 µl of the marker solution and follow the manufacturer's procedure for the IEF system.
2. After completion of the IEF, place the gel into a fixing solution to fix the proteins in the gel. Ensure the ampholytes are removed prior to staining. Note: An appropriate fixing solution may be prepared from Catalog Number F7264 (5× Fixing Solution).
3. Stain and destain the gel using stains such as Coomassie® stains.

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