



## BioMark™ Synthetic pI Markers

### Capillary Isoelectric Focusing: High resolution separation and accurate pI determination.

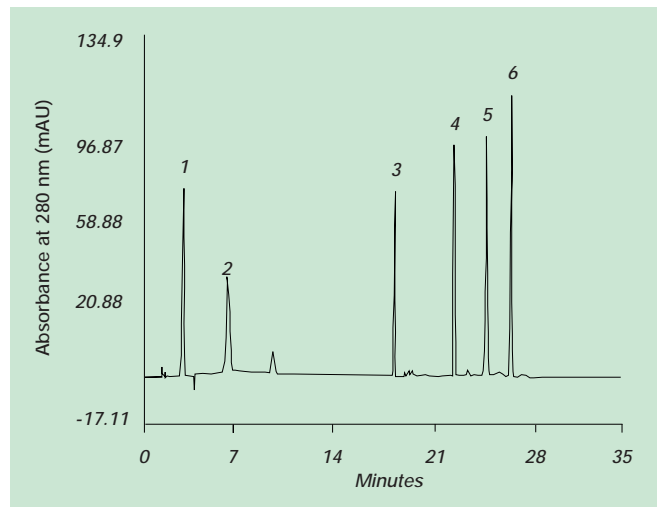
Capillary Isoelectric Focusing (CIEF) is a fast, high resolution method for separating proteins based on their isoelectric points. With the BioFocus® capillary electrophoresis system, sample is mixed with ampholytes and introduced into a capillary by pressure. When voltage is applied to the capillary, the ampholytes create a pH gradient, and the components of the sample migrate toward their unique isoelectric points (pI). When sharp pI zones are established, a mobilizing buffer enters the capillary and the entire pH gradient moves past a detector.

### The mark of distinction.

BioMark synthetic markers provide pI values with pin-point accuracy. Their unique characteristics provide distinct advantages over traditional IEF protein standards – they are highly stable, water soluble, absorb in both the UV and visible regions, and can be used as internal standards.

### Stability leads to consistently sharp peaks.

Over time, repeated freeze and thaw cycles of traditional protein IEF standards cause degradation of the macromolecules. This leads to pronounced broadening of the standard's peaks and the introduction of degradation products. However, BioMark synthetic markers exhibit *no* degradation during normal use, producing sharp peaks time after time.



*Separation of the 5-component BioMark synthetic pI marker mixture. The mixture was separated on the BioFocus 3000 CE system using ion addition mobilization. Peak identities: 1. focusing peak; 2. pI 10.4 marker; 3. pI 8.4 marker; 4. pI 7.4 marker; 5. pI 6.4 marker; 6. pI 5.3 marker.*



## BioMark Synthetic pI Markers

### Ordering Information

*Catalog No. Product Description*

#### Kits

- 148-2100 **BioMark Synthetic pI Marker Kit**  
 148-2101 **BioMark Synthetic pI Markers, blend pI 5.3,6.4,7.4,8.4,10.4, 200 µl**

#### Individual Markers

- 148-2102 **BioMark Synthetic pI Marker, pI 5.3, 200 µl**  
 148-2103 **BioMark Synthetic pI Marker, pI 6.2, 200 µl**  
 148-2104 **BioMark Synthetic pI Marker, pI 6.4, 200 µl**  
 148-2105 **BioMark Synthetic pI Marker, pI 6.5, 200 µl**  
 148-2106 **BioMark Synthetic pI Marker, pI 6.6, 200 µl**  
 148-2107 **BioMark Synthetic pI Marker, pI 7.0, 200 µl**  
 148-2108 **BioMark Synthetic pI Marker, pI 7.2, 200 µl**  
 148-2109 **BioMark Synthetic pI Marker, pI 7.4, 200 µl**  
 148-2110 **BioMark Synthetic pI Marker, pI 7.5, 200 µl**  
 148-2111 **BioMark Synthetic pI Marker, pI 7.7, 200 µl**  
 148-2112 **BioMark Synthetic pI Marker, pI 7.9, 200 µl**  
 148-2113 **BioMark Synthetic pI Marker, pI 8.4, 200 µl**  
 148-2114 **BioMark Synthetic pI Marker, pI 8.5, 200 µl**  
 148-2115 **BioMark Synthetic pI Marker, pI 8.6, 200 µl**  
 148-2116 **BioMark Synthetic pI Marker, pI 10.1, 200 µl**  
 148-2117 **BioMark Synthetic pI Marker, pI 10.4, 200 µl**

#### IEF Electrolytes

- 148-5028 **CIEF Catholyte, sodium hydroxide, 60 ml x 4**  
 148-5029 **CIEF Anolyte, phosphoric acid, 60 ml x 4**  
 148-5030 **CIEF Mobilizer, 60 ml x 4**  
 148-5031 **CIEF Bio-Lyte Ampholyte, pH 3-10, 2%, 60 ml**

### Optimum absorbance at 280 nm.

BioMark synthetic markers are substituted aminomethyl phenols with specifically modified side chains that produce strong absorbance at 280 nm. Protein IEF standards absorbance varies at 280 nm because the number of aromatic peptides is different in each protein.

### Strong absorbance in ultraviolet and visible ranges.

BioMark synthetic markers not only display strong absorbance in the UV range, they also exhibit a second absorbance peak in the visible range. This means the markers can be identified when used as an internal reference.

### Broad range of available pI markers for determination of unknown pI values.

An extensive number of BioMark pI markers is available for accurately determining pI values, ranging from a pI of 5.3 to 10.4.

### BioMark Synthetic pI Markers

pI	UV Maximum (nm)	Visible Maximum (nm)
5.3	252	414
6.2	244	417
6.4	243	424
6.5	239	422
6.6	235	400
7.0	237	426
7.2	236	421
7.4	239	428
7.5	238	416
7.7	232	424
7.9	232*, 269, 309	399
8.4	238	418
8.5	238	419
8.6	232	410
10.1	243	421
10.4	234	408

\*Primary maximum

### Available in kits or individually.

The BioMark pI marker kit contains the complete line of 16 individual markers, plus the five-marker blend. The BioMark kit is ideal for optimizing IEF conditions. If a narrow pH range is required, each of the 16 different pI values is available separately for creating a custom blend of standards.

Focus on Performance  
**The BioFocus® System**



**Bio-Rad  
 Laboratories**

**Life Science  
 Group**

U.S. (800) 4BIORAD • California (510) 741-1000 • Australia 02-9914-2800 • Austria (1)-877 89 01 • Belgium 09-385 55 11 • Canada (905) 712-2771 • China (86-10) 2046622 • Denmark 39 17 9947 • Finland 90 804 2200 • France (1) 43 90 46 90 • Germany 089 318 84-0 • India 91-11-461-0103 • Italy 02-21609 1 • Japan 03-5811-6270 • Hong Kong 7893300 • The Netherlands 031318-540666 • New Zealand 09-443 3099 • Singapore (65) 272-9877 • Spain (91) 661 70 85 • Sweden 46 (0) 8 627 50 00 • Switzerland 01-809 55 55 • United Kingdom 0800 181134