

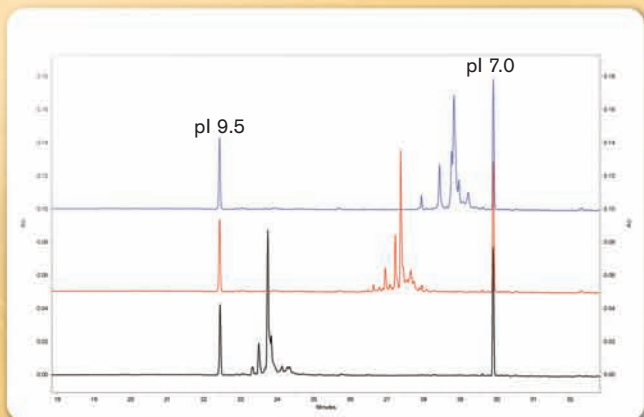
The power of precision.

cIEF pI Marker Kit



- Genomics
- Cell Analysis
- Particle Characterization
- Capillary Electrophoresis**
- Lab Automation
- Centrifugation
- Bioseparation
- Lab Tools

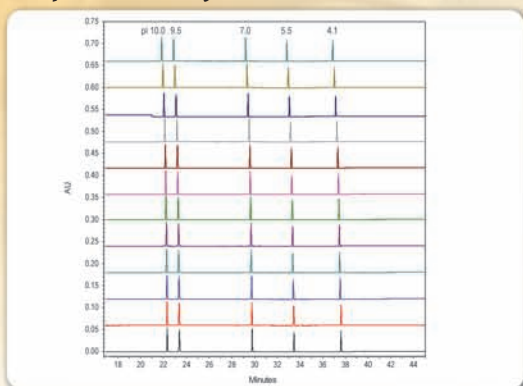
A Single Separation Method for Many Proteins



Separation of three different therapeutic monoclonal antibodies by cIEF. All three MABs have a pI between 7.0 and 10.

Capillary Isoelectric Focusing (cIEF) is a powerful technique allowing separation of proteins based on their isoelectric point. While various elements of this separation can be optimized, pI accuracy is a critical factor in the precision of cIEF. (For further information, see AIB A-11634A, "Identification of System Parameters Critical for High-Performance cIEF.")

Reproducibility

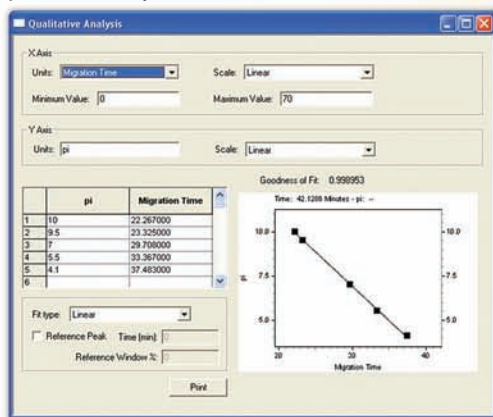


A set of five pI markers was separated by cIEF. These data illustrate reproducibility of this separation over 12 consecutive runs.

It is important to use an appropriate set of pI markers to generate a linear relationship on which to base assessment of pI. Protein pI markers are subject to degradation or modification, which may alter their actual pI relative to theoretical pI value. The use of peptides for determining pI minimizes the likelihood of pI variation and allows for more accurate assessment of pI.

Beckman Coulter offers a set of five peptide pI markers with the following values: 4.1, 5.5, 7.0, 9.5 and 10.0, for use with cIEF methods on the PA 800 *plus* Pharmaceutical Analysis System.

pI Linearity



At left: A plot of pI values versus detection time generated for the separation of five synthetic peptides. The mobilization of the pI markers fits a linear model with a correlation coefficient of 0.99, indicating that the mobilized pH gradient is highly linear.

pI Markers -- %RSD Detection Time and Area

	pI 10.0	pI 9.5	pI 7.0	pI 5.5	pI 4.1	pI 10.0	pI 9.5	pI 7.0	pI 5.5	pI 4.1
pI Markers	Time/(min)	Time/(min)	Time/(min)	Time/(min)	Time/(min)	Area	Area	Area	Area	Area
Injection 1	21.833	22.892	29.225	32.842	36.883	275469	272226	237655	219847	202542
Injection 2	21.942	23.000	29.342	32.967	37.025	275444	272744	238706	218951	204476
Injection 3	22.042	23.100	29.433	33.067	37.133	274401	270486	236338	218485	204759
Injection 4	22.117	23.175	29.525	33.167	37.242	272878	271245	236050	217135	205020
Injection 5	22.158	23.225	29.592	33.242	37.333	272279	269952	234948	217421	205664
Injection 6	22.192	23.250	29.617	33.275	37.375	273866	270389	236258	218168	205269
Injection 7	22.225	23.283	29.658	33.317	37.433	274832	272049	235831	217798	205999
Injection 8	22.258	23.317	29.692	33.350	37.467	275976	274272	236433	219248	208284
Injection 9	22.267	23.325	29.708	33.367	37.483	274490	271586	237327	218617	207423
Injection 10	22.300	23.358	29.750	33.417	37.542	275849	270337	235219	219550	208664
Injection 11	22.308	23.375	29.775	33.442	37.617	276735	269873	236694	220932	209053
Injection 12	22.325	23.392	29.800	33.467	37.608	278119	270477	236666	221408	208467
%RSD	0.70	0.68	0.61	0.59	0.62	0.59	0.49	0.44	0.60	0.99

cIEF Peptide Marker Kit (A58481)

Contents: Five synthetic peptide markers with pI values of 4.1, 5.5, 7.0, 9.5, 10.0. Each vial contains 240 µL of peptide. The kit volume enables 100 cIEF samples.

Advanced cIEF Starter Kit (A80976)

Contents: cIEF Peptide Marker Kit, Neutral Capillary cIEF Gel

Application Information Bulletins available on www.CELeader.com:

"Identification of System Parameters Critical for High-Performance cIEF" (A-11634A)

"A Robust cIEF Method: Intermediate Precision for the pH 5-7 Range" (A-12015A)

"High-Resolution cIEF of Therapeutic Monoclonal Antibodies: A Platform Method Covering pH 4-10" (A-12026A)



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B2009-9789

www.beckmancoulter.com

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BMR-PRINTED IN U.S.A.

