PHARMACEUTICAL Application Briefs

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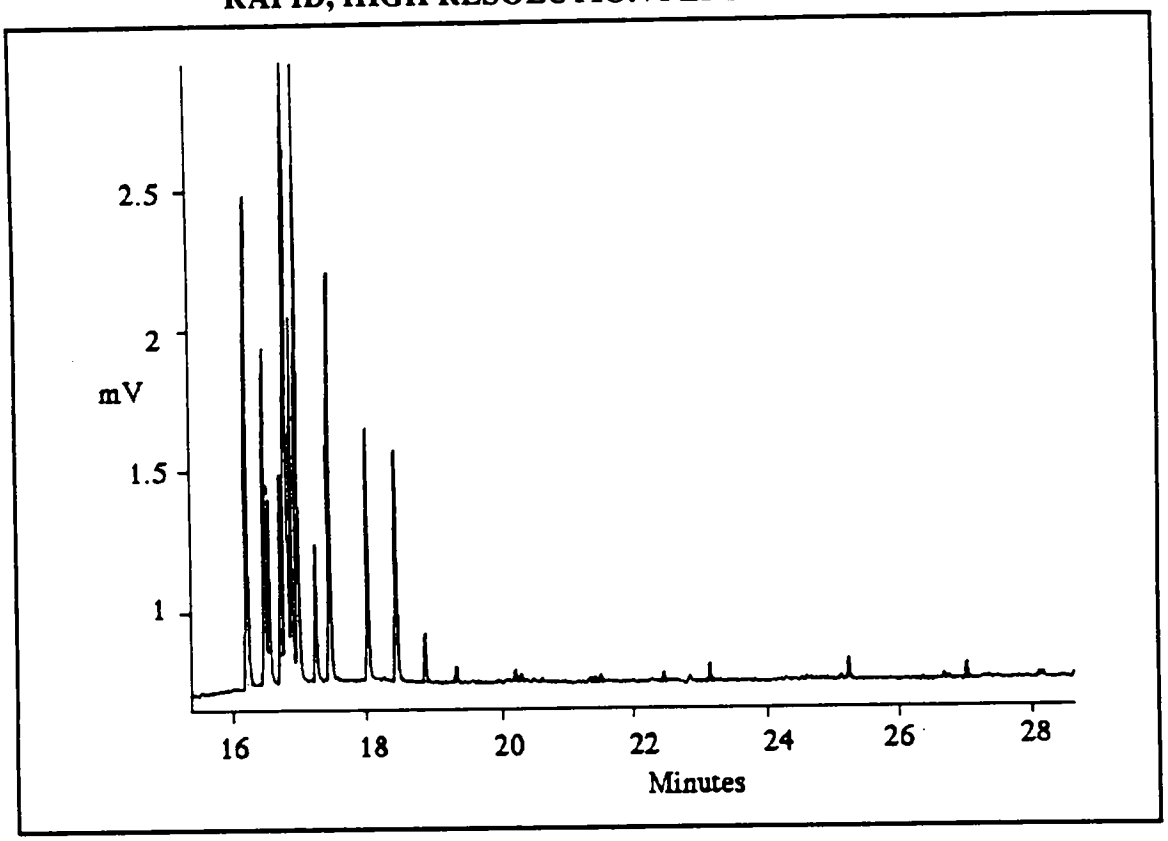
Rx 025 12/90

Rx Prescription for success

CAPILLARY ELECTROPHORESIS PROVIDES RAPID, HIGH RESOLUTION PEPTIDE MAPPING



CONDITIONS ON WATERS QUANTA™ 4000

MODE:	FZCE
BUFFER:	100 mM H_3PO_4 pH = 2.4
MODIFIER:	None
CAPILLARY:	75 µm x 60 cm
VOLTAGE:	+ 12 KV
DETECTOR:	214 nm
INJECTION:	30 sec Hydrostatic

SAMPLE MATRIX: **9 Amino Acid Synthetic Peptide Solution**

REFERENCE: John Van Antwerp and Larry Mugavero, Application Chemists, Morristown, N.J. Laboratory

Millipore Corporation Waters Chromatography Division 34 Maple Street Milford, MA 01757 (508) 478-2000
Author Peter Hahn

INTERESTING FACTS

1. Are you sure your peptide is pure?

2. A reverse phase HPLC separation of this sample showed only two major peaks.

3. The two major peptide peaks are quickly and easily resolved by CE. Many other impurities are also detected in this 22 minute separation. The impurity levels detected and quantitated by the Quanta 4000 are well below 1 %.

4. With CE, extraneous peaks from TFA, CH_3CN or other organic solvents are not present. This makes the determination of which peaks are real easier with capillary electrophoresis.

5. CE separations display much less baseline drift compared to HPLC separations since gradient conditions are not required.

6. The Quanta 4000 detector allows impurity quantitation below 1% levels with good reproducibility.