

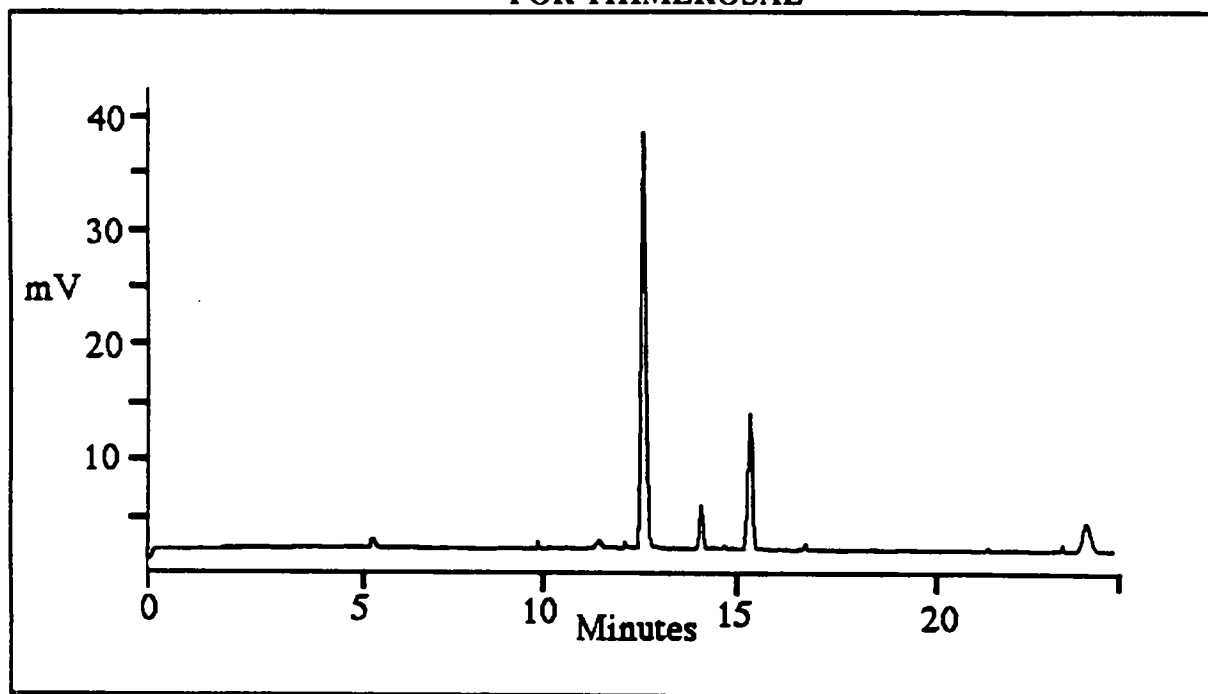


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R Prescription for success

Rx 030 12/90

CAPILLARY ELECTROPHORESIS STABILITY INDICATING ASSAY FOR THIMEROSAL



CONDITIONS ON WATERS QUANTA™ 4000

MODE: FZCE
BUFFER: 50 mM NaH₂PO₄,
pH = 7
CAPILLARY: 75 μ m x 60 cm
VOLTAGE: + 18 KV
DETECTOR: 214 nm
INJECTION: 5 sec Hydrostatic

SAMPLE MATRIX: Degraded Sample
Solution

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

INTERESTING FACTS

1. Thimerosal, a mercury containing antifungal agent, has been difficult to analyze by HPLC. With CE, the separation of thimerosal and its degradation products is readily performed in less than 25 minutes.
2. Thimerosal is routinely used in ophthalmic solutions as a preservative. In this example, thimerosal was intentionally degraded prior to analysis. Capillary electrophoresis provides a stability indicating assay for this preservative.
3. Thimerosal HPLC methods traditionally have contained EDTA to help stabilize the compound. In CE, EDTA was not required to achieve reproducible results.
4. The Quanta 4000 detector allows impurity quantitation below 1% levels with good reproducibility.