

NOTE NO. 35 - August 6 1990

## SOLID PHASE EXTRACTION OF VERAPAMIL AND ITS PRIMARY METABOLITE, NORVERAPAMIL, FROM HUMAN SERUM USING 40 MICRON GFF ISRP MATERIAL

### Analytes:

Chromatogram #1:

Verapamil (B); (200 ng/ml) spiked in human serum  
Actual human serum sample collected from male volunteer receiving an oral dose of 240 mg of verapamil HCl twice daily  
Norverapamil (A); Verapamil (B)

Chromatogram #2:

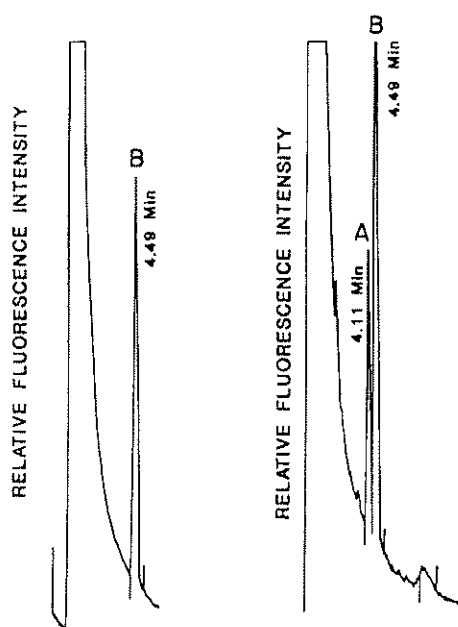
**Solid Phase Extraction Procedure:** 200 mg of 40 micron GFF-ISRP material was packed into 1.5 ml solid phase reservoirs. Column was conditioned with acetonitrile, water, and pH 8 phosphate buffer. A 1.0 ml aliquot of serum was diluted with an equal volume of the phosphate buffer, passed slowly through the solid phase material, and washed with 2.0 ml of buffer. Analytes were eluted with 1.0 ml of 50/50 acetonitrile/pH 2.5 phosphate buffer.

**Analytical Column:** 5 micron 10 cm Phenyl with C18 guard column

**Mobile Phase:** 50% Acetonitrile, 50% 0.05M NaH<sub>2</sub>PO<sub>4</sub> (pH 2.5)

Chromatogram #1

Chromatogram #2



### Detection:

Fluorescence,  
Ex: 280 nm  
Em: 310 nm

**Flow Rate:** 1.0 ml/min

**Sample Size:** 20 microliters

\*Based on an article which appeared in the J. Liq. Chromatogr., 13(19), 3861-3889, (1990).

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