

IMPROVED SIZE SEPARATION OF BENZOCAINE IN AN OINTMENT

Small molecule GPC is a method whose time has come! Separations which were attractive with  $\mu$ STYRAGEL™ columns but required a bank of three columns and considerable time appear very attractive with ULTRASTYRAGEL™ columns. GPC as an LC separation mode for small molecules offers the following advantages:

1. Simple mobile phase (100% THF typically).
2. No sample preparation - simply dissolve the sample in THF, filter and inject.
3. No methods development - all sample components elute in a single column volume.

Some months ago, a separation of benzocaine and benzyl alcohol was reported (Lab Highlight Vol. 2, No. 2) on a bank of three  $\mu$ STYRAGEL columns. Clearly, size separation of this sample was desirable. However, three columns makes the investment in columns prohibitive for most users. ULTRASTYRAGEL columns appear to offer several benefits over the separation on  $\mu$ STYRAGEL columns. A single 100Å column is adequate for the separation because of the very high efficiency of ULTRASTYRAGEL columns. Comparison of the separation on  $\mu$ STYRAGEL columns (Figure 1) and on an ULTRASTYRAGEL column (Figure 2) shows that resolution is superior, analysis time is shorter (10 min vs. 15 min) and less solvent is consumed (10 ml vs. 30 ml) when an ULTRASTYRAGEL 100Å column is used for this small molecule separation.

SEPARATION OF BENZOCAINE OINTMENT ON  $\mu$ STYRAGEL™ COLUMNS

COLUMNS:  $\mu$ STYRAGEL™ 10<sup>3</sup>Å, 500Å & 100Å  
SOLVENT: THF  
FLOW RATE: 2 ML/MIN  
DETECTOR: M440, 254 NM

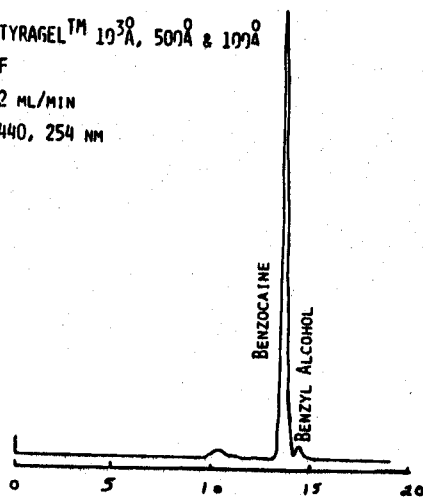


FIGURE 1

SEPARATION OF BENZOCAINE OINTMENT ON 100Å ULTRASTYRAGEL™ COLUMN

COLUMN: 1-100Å ULTRASTYRAGEL™  
 $N_T = 11,450$ ;  $N_5 = 10,060$   
SOLVENT: THF  
FLOW RATE: 1 ML/MIN

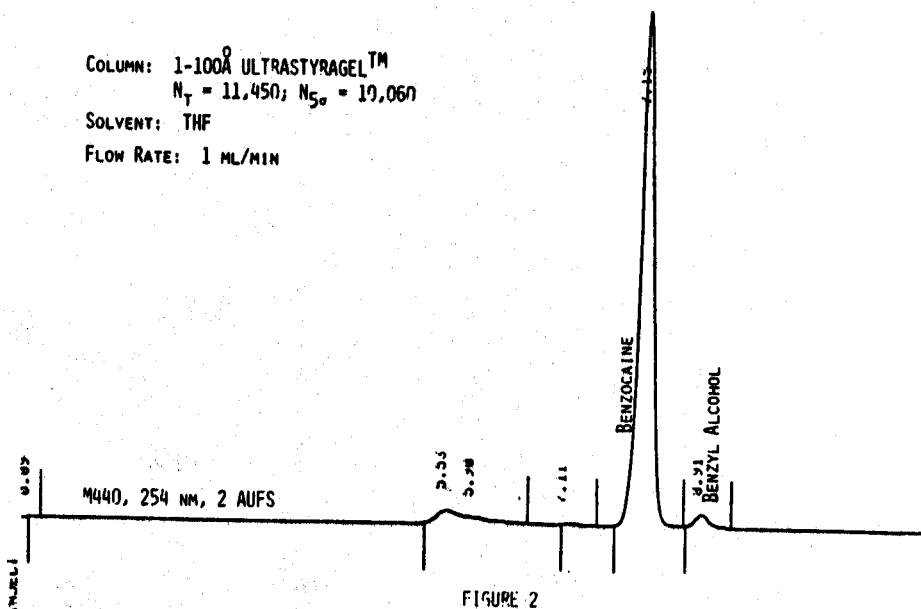


FIGURE 2

Hal Richardson