

Waters

Lab Highlights

RAPID SIZE SEPARATION OF BENZOCAINE IN OINTMENT

In the analysis of many pharmaceutical and cosmetic formulations, rapid sample preparation and analysis is desirable. Often a combination of techniques on μ STYRAGELTM Columns and judicious detector choice can speed up an otherwise complex assay.

An example of this is shown for two active ingredients in an ointment preparation. Figure 1, below, illustrates a relatively transparent scan of the ointment base (polyethylene glycol - mono laurate) dissolved in the mobile phase and monitored at 254 nm. The ointment sample with the active ingredient (Figure 2) dissolved in THF and monitored at 254 nm under the same conditions yields the major bacteriacide, benzocaine (A) with a smaller amount of benzylalcohol (B) as a secondary active ingredient. A synthetic mixture containing benzocaine at the formulation level, and excess benzylalcohol, is shown in Figure 3 and provides a simplified method for quantitation in under 15 minutes.

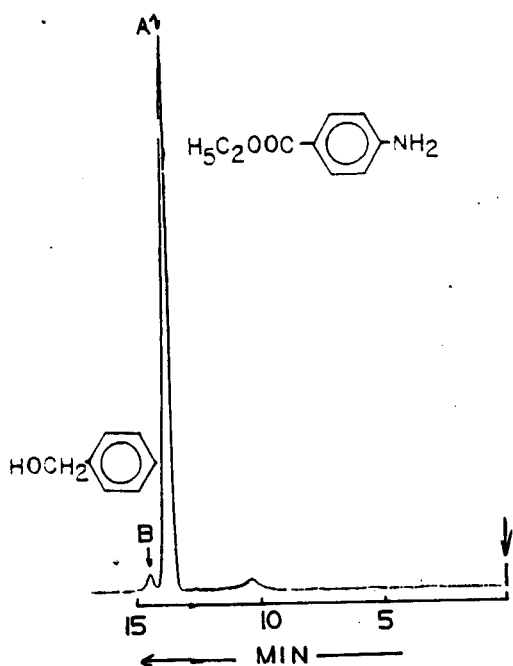


FIG 2

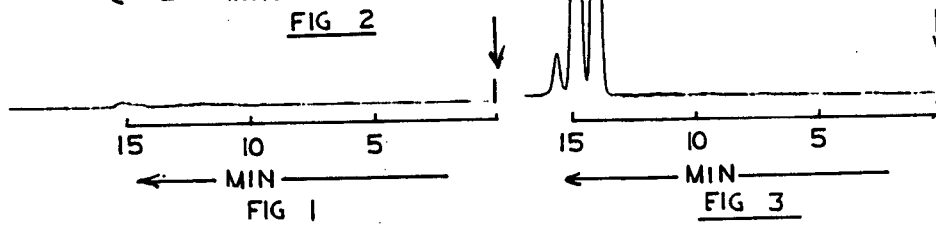


FIG 1

Columns: μ STYRAGELTM 10³ \AA , 500 \AA & 100 \AA
 Solvent: THF
 Flow Rate: 2 ml/min
 Detector: M440, 254 nm
 Sample: 10 μ l of 0.5% w/v