Waters
Lab Highlights
An Internal Communication
of Applications and Techniques
LAH 11
POLYMER-STYRENE
81.600.104.004.011
(.078)

ULTRASTYRAGEL (100Å) VS. SHODEX (A801)

ULTRASTYRAGEL WINS!

Polystyrene 450 is a mixture of low molecular weight oligomers that can be conveniently used to compare the resolving power of small pore size GPC columns such as 100Å Ultrastyragel and Shodex A801. The resolution of PS450 with two 30 cm 100Å Ultrastyragel columns (total length 60 cm) is far superior to that of one 50 cm Shodex A801. This improvement is much greater than that which can be ascribed solely to the extra length of Ultrastyragel.

- All valleys between adjacent peaks (A,B,C,D) are much deeper with Ultrastyragel
- Peak E is clearly resolved with Ultrastyragel but is barely discernible as a shoulder with Shodex.
- Peak F is partially resolved with Ultrastyragel but not at all with Shodex
- 100Å Ultrastyragel is capable of resolving higher molecular weight species than Shodex A801 since there is relatively more blank baseline between the exclusion volume (V_e) and the start of elution (G) of the polystyrene sample in Figure #1.

Figure #1

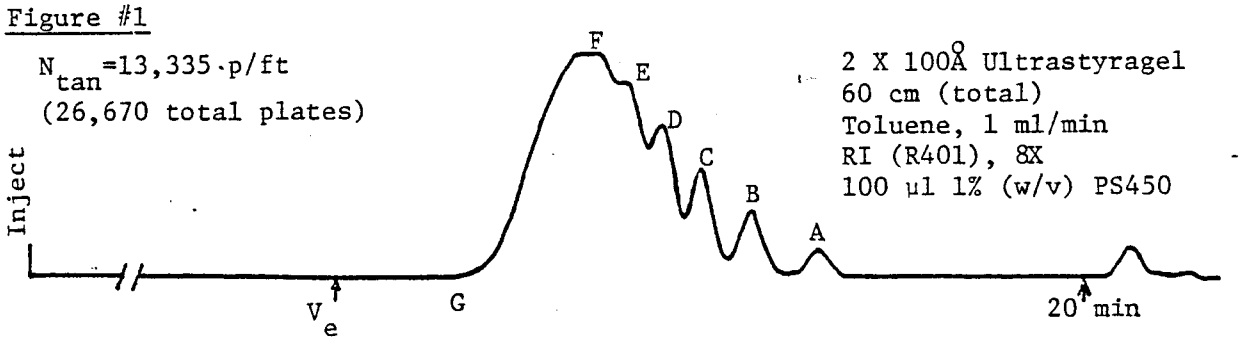
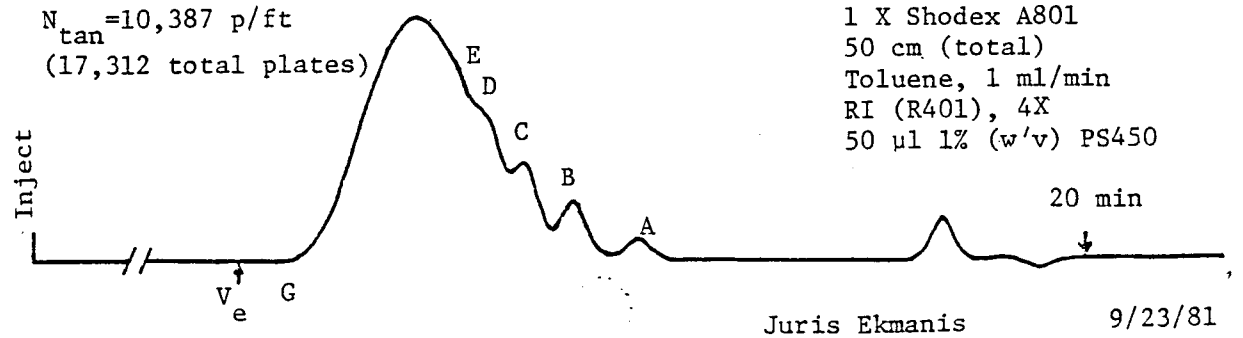


Figure #2



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