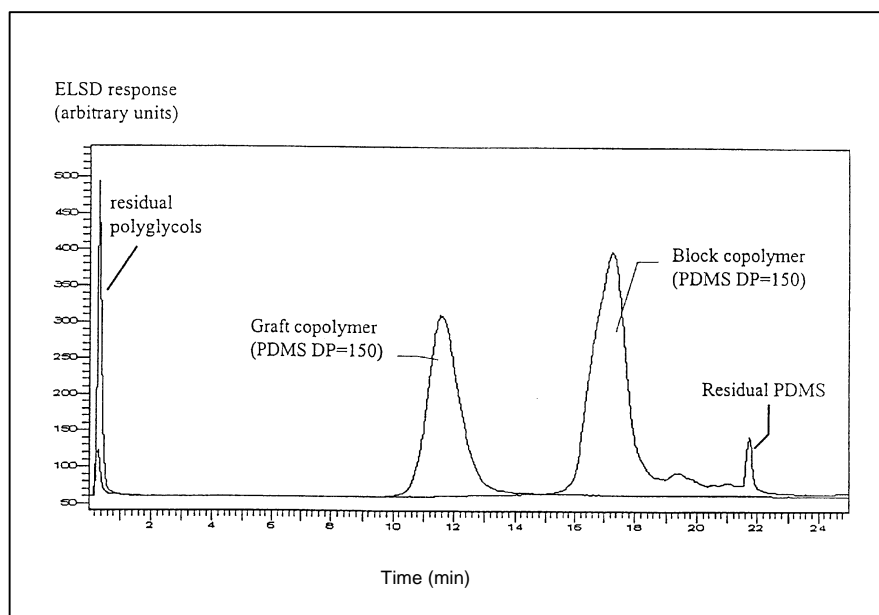


## Analysis of Organosilicone Copolymers by Gradient Polymer Elution Chromatography with ELSD



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Organosilicone copolymers have found numerous applications in the cosmetic, detergent and coating industries. Gradient polymer elution chromatography (GPEC) covers the application field of polymers and gradient separation technology and is distinguishable from other mechanisms of gradient HPLC separations. Polymer separation by GPEC is based on a precipitation-redissolution mechanism. The major difference versus other HPLC separations is that with GPEC, interactions with the stationary phase are minimized. GPEC coupled to ELSD is shown to be adapted to the analysis of organosilicone copolymers. It enables the separation and quantification of unreacted homopolymers and the characterization of a copolymer based on its chemical composition distribution.

### Chromatographic conditions :

Column : Nova-Pak cyanopropyl (CN).

Flow Rate : 1 ml/mn

Mobile phase A : H<sub>2</sub>O

Mobile Phase B : i-C<sub>3</sub>H<sub>7</sub>OH

Nebulizer temperature : 40°C

Evaporation temperature : 80°C

Pressure : 1 Bar

### Gradient :

T	0	2	17	23	25
%A	100	100	0	0	100
%B	0	0	100	100	0

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