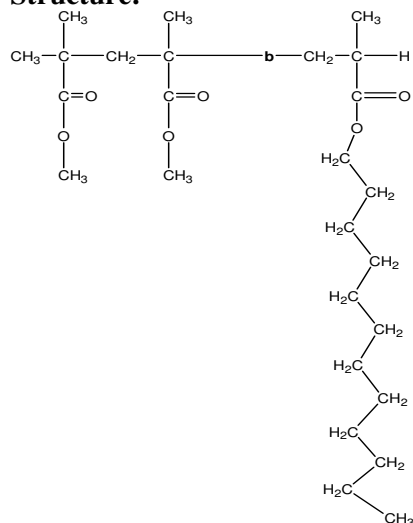


Poly(Methyl methacrylate-*b*-Lauryl methacrylate)

Structure:



Mn $\times 10^3$ MMA-b-LMA	PDI
2.5-b-2.6	1.10

The polymer was synthesized by GTP process. Polymer was precipitated into methanol/water.

The polymer was characterized by SEC and ^1H NMR analysis.

The block copolymer is soluble in THF and CHCl_3 .

The figure displays the ^1H NMR spectrum of a P19818-PMMA block copolymer. The x-axis represents the chemical shift in ppm, ranging from 3.9 to 0.3. The spectrum shows several distinct peaks corresponding to the different proton environments in the copolymer.

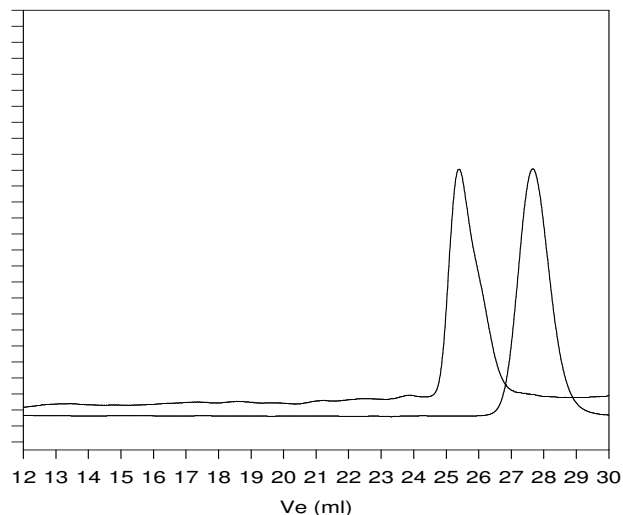
Chemical Structure: The structure of the P19818-PMMA block is shown above the spectrum. It consists of a PMMA chain (poly(methyl methacrylate)) with a P19818 block attached. The P19818 block is a poly(ether ether ketone) derivative, specifically poly(2,2,6,6-tetramethyl-4,4'-biphenylene-1,3-dione). The structure is labeled with various protons and their corresponding chemical shifts in ppm:

- 1.3 ppm:** Protons on the CH_3 groups of the PMMA backbone.
- 3.6 ppm:** Protons on the OCH_3 groups of the PMMA backbone.
- 0.9 (s), 1.02 (b), 1.2 (iso):** Protons on the CH_3 groups of the P19818 block.
- 1.36, 1.21, 1.16, 1.08, 1.06, 0.98:** Protons on the CH_2 groups of the P19818 block.
- 0.78:** Protons on the CH_3 groups of the P19818 block.

Peak Assignments: The peaks in the spectrum are assigned to the protons in the structure as follows:

- 7.43 ppm:** Aromatic protons of the P19818 block.
- 6.00 ppm:** Aromatic protons of the P19818 block.
- 3.24 ppm:** Protons on the OCH_3 groups of the P19818 block.
- 3.04 ppm:** Protons on the CH_2 groups of the P19818 block.
- 3.78 ppm:** Protons on the CH_3 groups of the P19818 block.

P19818-MMALMA



Size exclusion chromatography of polymer:

- Poly(MMA), $M_n=2,500$, $M_w=2,800$, $PI=1.12$
- Block Copolymer PMMA(2,500)-b-PLMA(2,600), $PI=1.10$
The composition determined from ¹H NMR.