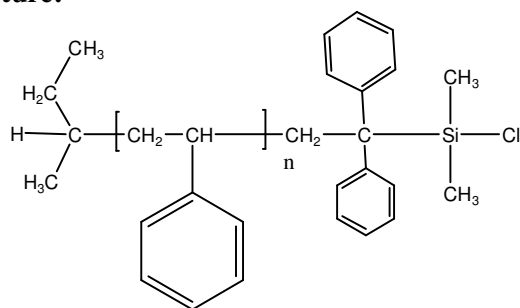


Sample Name:

Dimethyl Chlorosilane-Terminated Polystyrene

Sample # P3571-SSiCl

Structure:

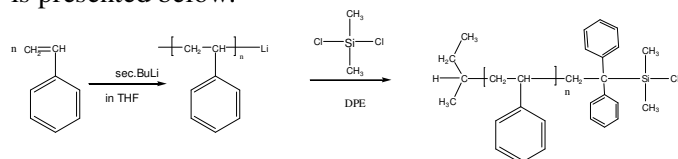


Composition:

$M_n \times 10^3$	M_w/M_n	Functionality SiCl
130	1.07	>98%

Synthesis Procedure:

Dimethyl chlorosilane-terminated polystyrene was prepared by anionic living polymerization of styrene in THF and termination with a large excess of dimethyl dichlorosilane. The process was carried out in a specially designed apparatus that allows to get high end-functionalized polystyrene. The scheme of the reaction is presented below.

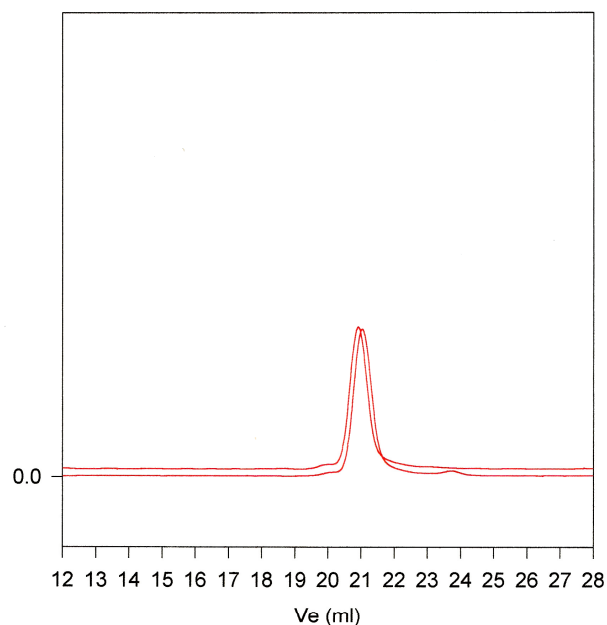


Characterization:

The molecular weight and polydispersity index (M_w/M_n) of polystyrene were determined before functionalization with chlorosilane by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV and refractive index detectors. The functionalized polymer was first treated with n-BuLi to deactivate the end group, and analyzed by SEC to detect any dimer formation. The presence of dimer was not detected by SEC. The end-functionality is over 99%.

SEC of Sample:

P3571-SSiCl



Size exclusion chromatography of polystyrene terminated with dimethyl chlorosilane before and after termination with dimethyl dichlorosilane:

Mn:130000 Mw:139000 Mw/Mn:1.07