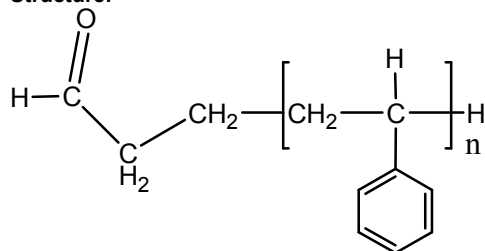


Sample Name:
Propionaldehyde Terminated Polystyrene

Sample #: P10114A- S-CHO (anionic process)

Structure:



Composition:

Mn x 10 ³	PDI	Functionality %
3.8	1.26	>70%

Synthesis Procedure: Anionic Process

Characterization:

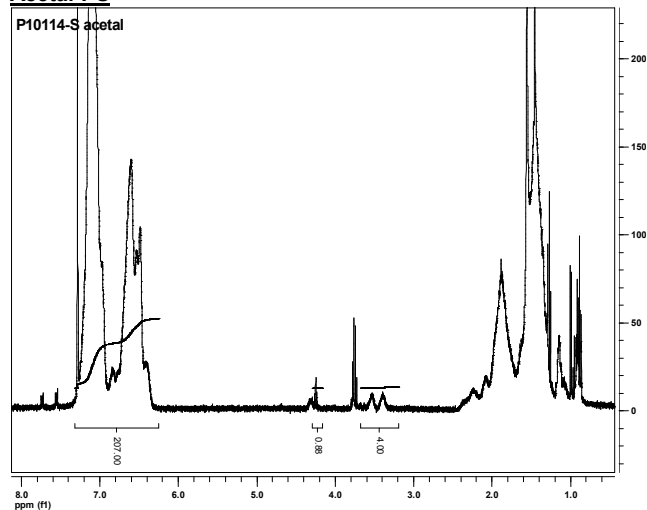
The molecular weight and polydispersity index of this polymer were determined before addition of the CO₂H function, by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV and refractive index detector. Polymer functionality was determined by titration with NaOH using phenolphthalein as the indicator.

Deprotection of diethyl acetal was performed using trifluoroacetic acid in THF OT HCl/THF at room temperature.

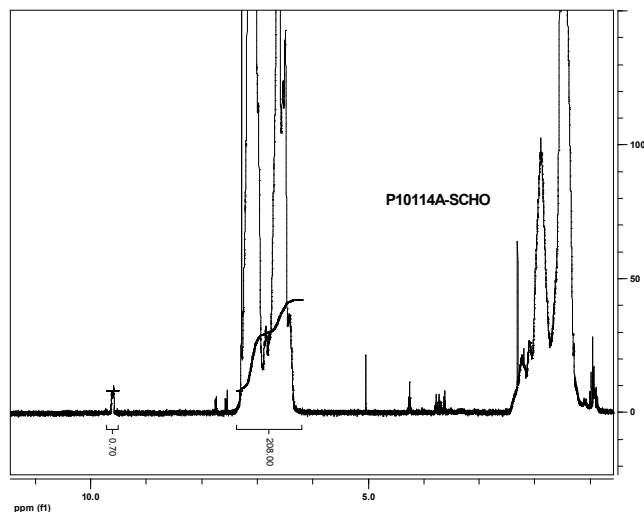
Solubility: Polymer is soluble in toluene, THF, CHCl₃ and can be precipitated in water, cold methanol.

¹H NMR of Sample:

Acetal-PS

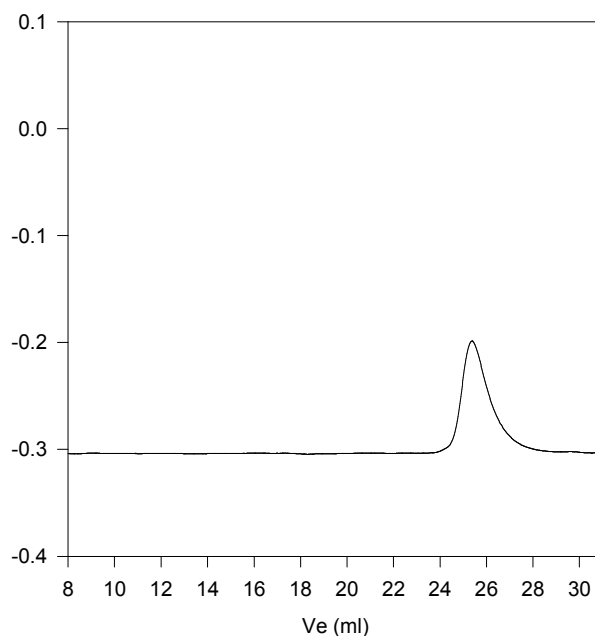


HNMR for the PS-CHO



SEC of Sample:

P10114-SCHO



Size exclusion chromatography of polymer
 — PS, M_n=3,800, M_w=4,800, Mw/Mn=1.26