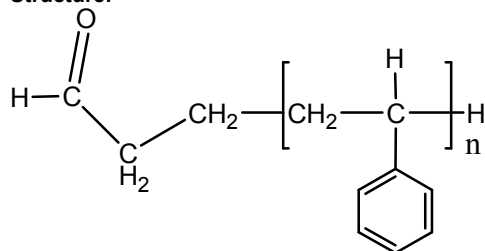


**Sample Name:**  
**Propionaldehyde Terminated Polystyrene**

**Sample #: P10115A S-CHO (anionic process)**

**Structure:**



**Composition:**

Mn x 10 <sup>3</sup>	PDI	Functionality %
5.2	1.26	>77%

**Synthesis Procedure: Anionic Process**

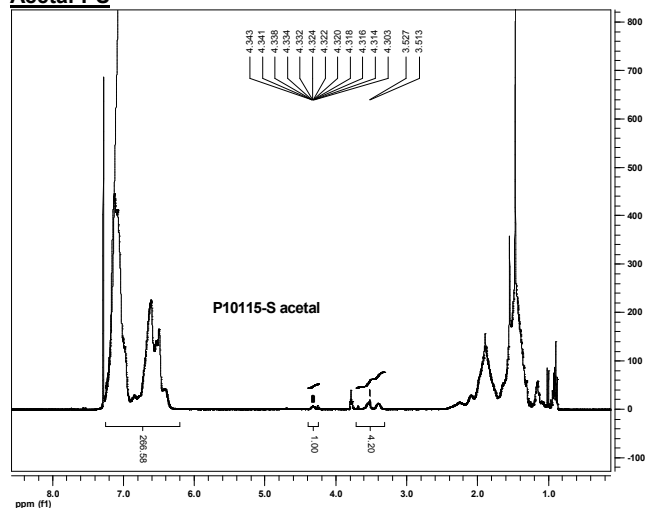
**Characterization:**

The molecular weight and polydispersity index of this polymer were determined before addition of the CO<sub>2</sub>H 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.

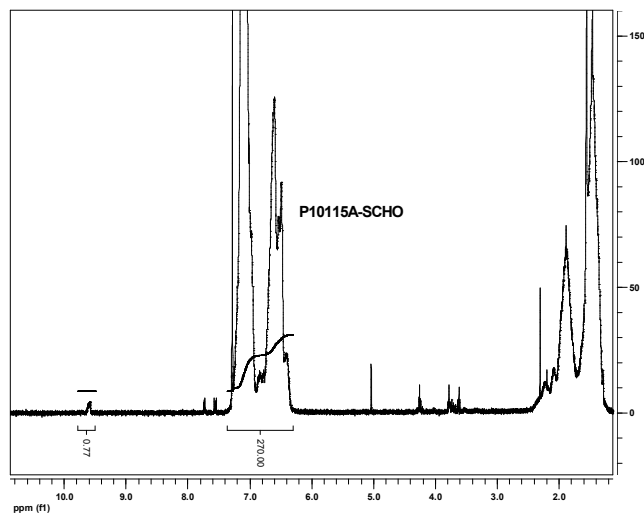
Deprotection of diethyl acetal was performed using trifluoroacetic acid in THF OT HCl/THF at room temperature.

**Solubility:** Polymer is soluble in toluene, THF, CHCl<sub>3</sub> and can be precipitated in water, cold methanol.

**<sup>1</sup>H NMR of Sample:**  
**Acetal-PS**

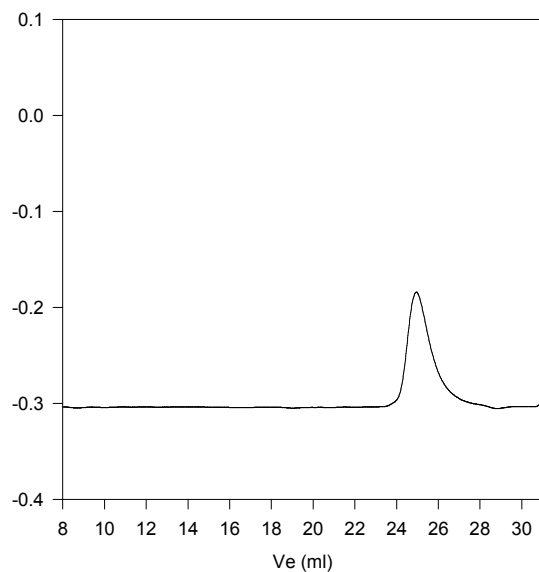


**HNMR for the PS-CHO**



**SEC of Sample:**

**P10115-SCHO**



Size exclusion chromatography of polymer  
 — PS, M<sub>n</sub>=5,200, M<sub>w</sub>=6,500, Mw/Mn=1.26