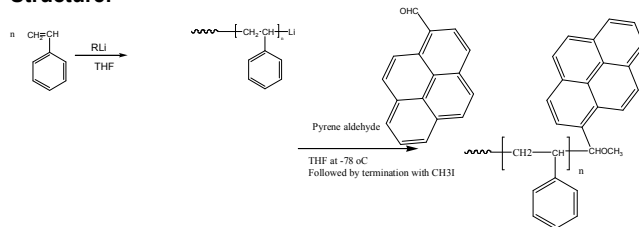


**Sample Name:**  
 **$\omega$ -Pyrene Terminated Polystyrene**

**Sample #:** P4565-SPy

**Structure:**



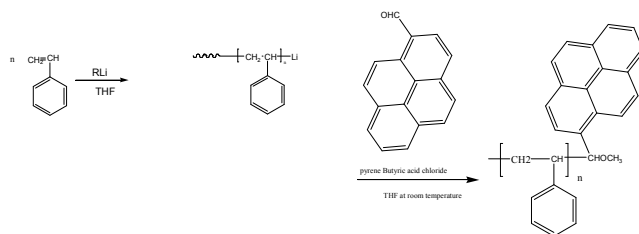
**Composition:**

Mn x 10 <sup>3</sup>	PDI
1.8	1.30

**Synthesis Procedure:**

The functionalized polymer was prepared by anionic living polymerization of styrene using monofunctional as initiator. The reaction was terminated with 1-pyrene aldehyde

The obtained polymer was purified by passing through a column packed with neutral Al<sub>2</sub>O<sub>3</sub> and the obtained polymer was precipitated in methanol. Polymer was dried at room temperature under vacuum. The scheme of the reaction is as follows:



**Characterization:**

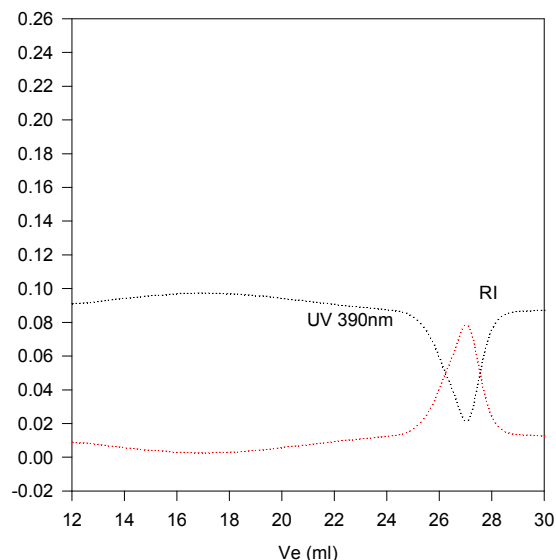
The molecular weight and polydispersity index of this polymer were determined by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV (at 390 nm) and refractive index detector. Polymer functionality was determined by the FTIR/ HNMR. The Pyrene functionality close to 1.0

**Solubility:** Polymer is soluble in THF, Dioxane, CHCl<sub>3</sub> and precipitated out from methanol/water, and in cold hexane.

FTIR of the Polystyrene and Before reaction with Pyrene aldehyde the C=O of the aldehyde disappeared in their FTIR analysis indicating the reaction of polystyryllithium with pyrene aldehyde

**SEC of Sample:**

**P4565-SPy**



Size exclusion chromatography of Pyrene labeled polystyrene

..... Polystyrene ( $\omega$ -pyran terminated), M<sub>n</sub>=1800, M<sub>w</sub>=2300, M<sub>w</sub>/M<sub>n</sub>=1.30

**HNMR spectrum of the product;**

