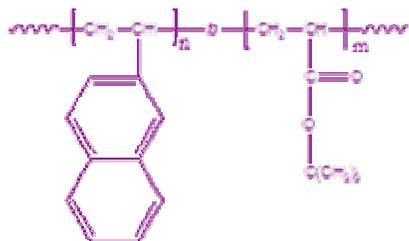


**Sample Name:** Poly(2-vinyl naphthalene-b-t-butyl acrylate)

**Poly(2-vinyl naphthalene-b- t-butyl acrylate)**



**Sample # P3311A-VNtBuA**

**Composition:**

Mn x 10 <sup>3</sup> VN-b-tBuA	PDI
30.8-b-46.2	1.09

**Synthesis Procedure: (please check)**

The details are given in the following paper:

Faquan Zeng, Mu Yang, Jianxin Zhang, Sunil K. Varshney. *Synthesis and characterization of block copolymers from 2-vinylnaphthalene by anionic polymerization*, Journal of Polymer Science Part A: Polymer Chemistry, 40, 24, 4387-4397 2002.

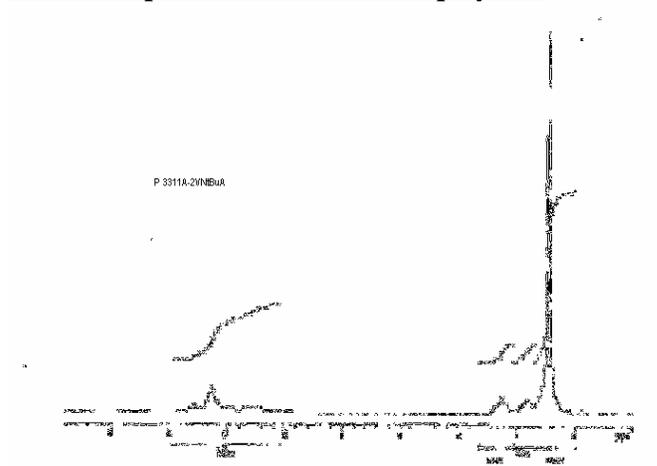
**Characterization:**

An aliquot of the anionic poly 2-vinyl naphthalene block was terminated before addition of D3 and analyzed by size exclusion chromatography (SEC) to obtain the molecular weight and polydispersity index (PDI). The final block copolymer composition was calculated from <sup>1</sup>H-NMR spectroscopy.

**Solubility:**

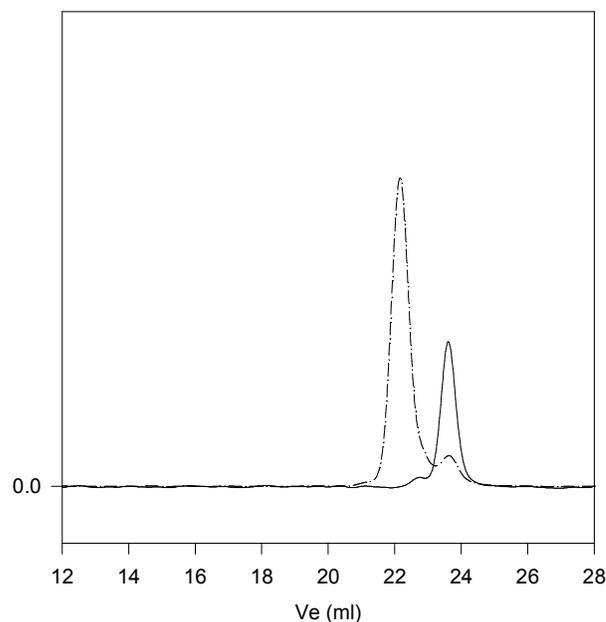
Block copolymer is soluble in toluene, cyclohexane, THF, CHCl<sub>3</sub>. The polymer can be precipitated from ethanol, methanol, water.

**<sup>1</sup>H-NMR Spectrum of the block copolymer:**



**SEC of the block copolymer:**

**P3311A-2VNtBuA**



Size exclusion chromatography of  
poly(2Vinyl naphthalene-b-tert.butylacrylate)  
Molecular weight determined on line light scattering detector  
Viscotek

— Poly(2 vinyl naphthalene), M<sub>n</sub>=30800, M<sub>w</sub>=, PI=1.09  
- - - Block Copolymer P2VN(30800)-b-PtBuA(46200), PI= 1.09

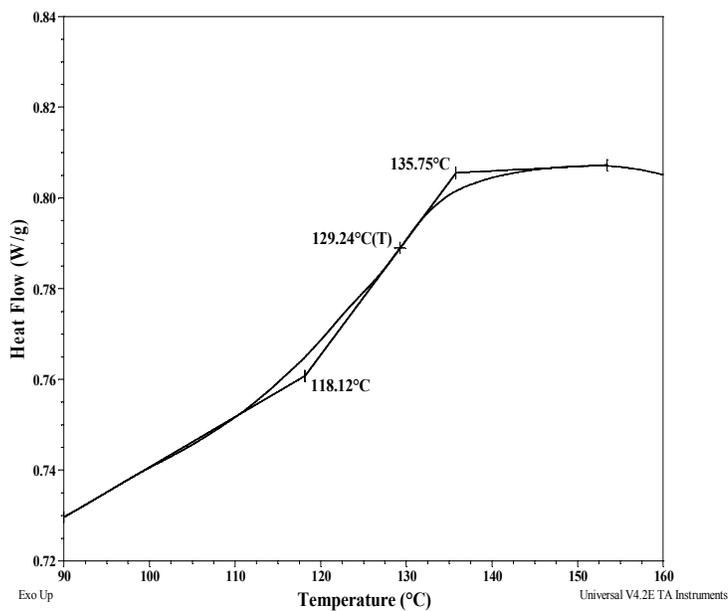
## Thermal analysis of sample P3311A-2VNtBuA

Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10°C/min. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature ( $T_g$ ).

## Glass transition temperature at a glance

$T_g$ for PS block	129°C
$T_g$ for nBuMA block	24°C

## Thermogram of P2VN block:



## Thermogram for tBuA block

