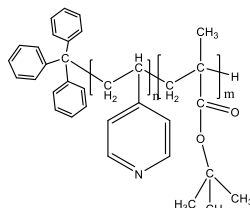


Sample Name:

Poly (4-vinyl pyridine -b-t-butyl methacrylate)

Sample #: **P43679-4VPtBuMA**

Structure:



Composition:

$M_n \times 10^3$ 4VP-tBuMA	PDI
80.0-b-100.0	1.26

T_g for tBuMA block: 127 °C
T_g for 4VP block: 152 °C

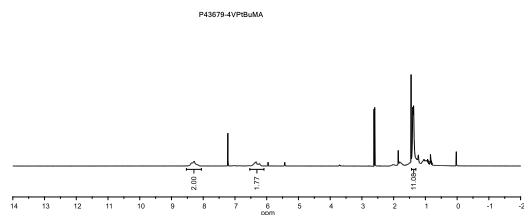
Synthesis Procedure:

Poly(4VP-t-butyl methacrylate) is synthesized by anionic polymerization process. 4VP monomer was polymerized in Hexamethylphosphoramide (HMPTA) aprotic solvent, it selectively solvates cations and maintain solubility of living anions of Poly 4VP, avoid the agglomeration of anions in THF-HMPTA. tBuMA monomer was added after polymerization of 4VP and polymerization of tBuMA was carried out in ice water for 8h.

Characterization:

The product was characterized by size exclusion chromatography (SEC) and ^1H NMR analysis.

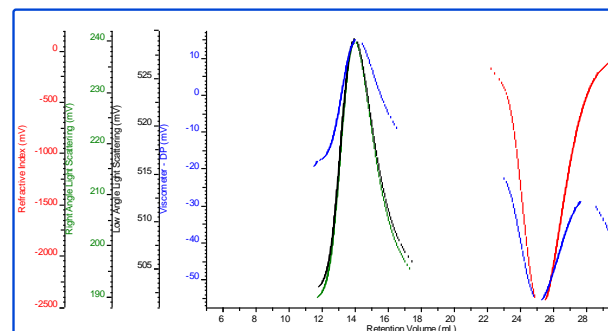
^1H NMR Spectrum of the block copolymer:



SEC elugram of the polymer:

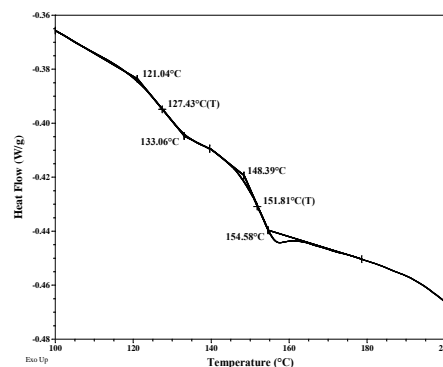
P43679-4VPtBuMA

dn/dc	0.1000
Flow Rate	0.7000
Solvent	DMF with LiBr
Method	Calibration_2020-11-25_PMMA-85K-0004.vcm



Sample	M_n	M_w	M_p	M_w/M_n
P43679-4VPtBuMA_1_202	180,485	241,387	257,984	1.337

DSC Thermogram of the polymer:



Reference:

S. K. Varshney, X. F. Zhong and A. Eisenberg
Macromolecules, 1993, 26, 701-706.