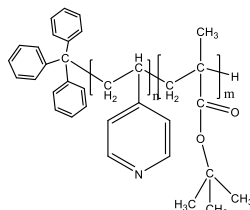


Sample Name:

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

Sample #: **P43678-4VPtBuMA**

**Structure:**



**Composition:**

Mn $\times 10^3$ 4VP-tBuMA	PDI
50.0-b-67.0	1.18

T <sub>g</sub> for tBuMA block: 127 °C
T <sub>g</sub> for 4VP block: 152 °C

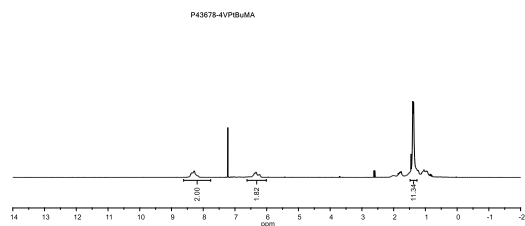
**Synthesis Procedure:**

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.

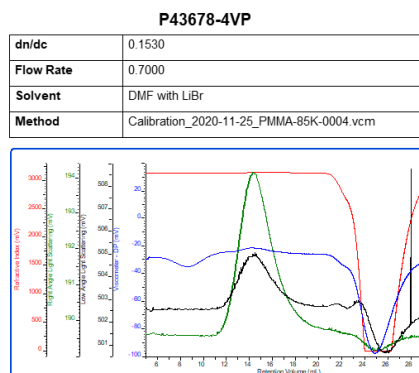
**Characterization:**

The product was characterized by size exclusion chromatography (SEC) and <sup>1</sup>H NMR analysis.

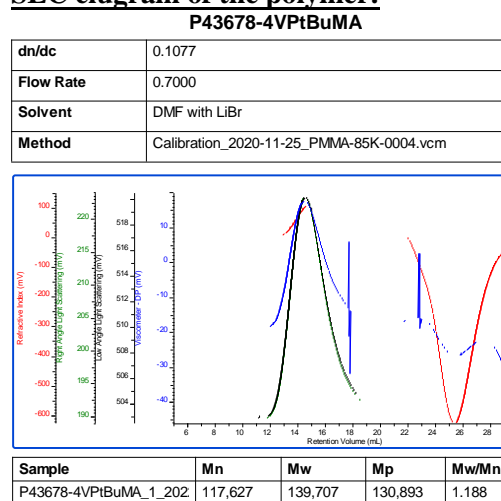
**<sup>1</sup>H NMR Spectrum of the block copolymer:**



**SEC elugram of the first Block:**

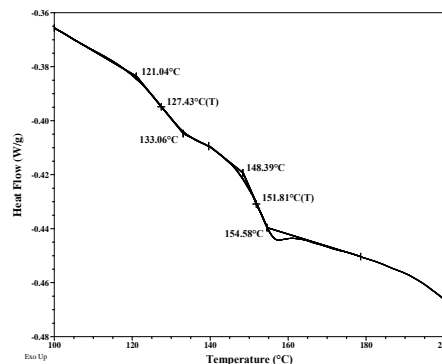


**SEC elugram of the polymer:**



Sample	Mn	Mw	Mp	Mw/Mn
P43678-4VPtBuMA_1_202	117,627	139,707	130,893	1.188

**DSC Thermogram of the polymer:**



**Reference:**

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