

# Product Profile

## Identification

**Product Name:** Poly(styrene-b-2-vinyl-pyridine)

**Product Lot Number:** P18547-R-S2VP

**CAS #:** 24980-54-9

**Product Chemical Architecture:**



**Composition:**

Composition (S-b-2VP)	95,000-b-119,000
2VP mole %	55.7
Mn (g/mole)	214,000
Mw (g/mole)	232,000
Mw/Mn	1.08
dn/dc (mL/g) in DMF at 35 °C	0.158

## Method of Synthesis

The polymer is synthesized by anionic polymerization process.

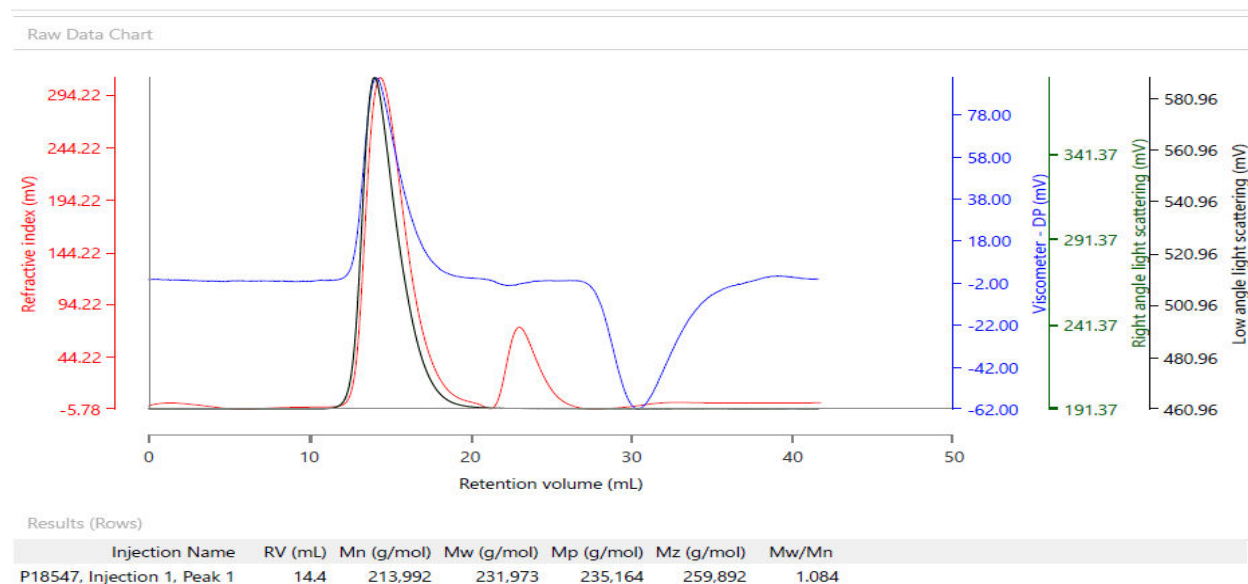
**Solubility in different solvents:**

THF	√	DMF	√
Alcohol	Depends on composition	CHCl <sub>3</sub>	√
Toluene <sub>(hot)</sub>	√	Water	X

## Validation of Architecture

### A. Gel Permeation Chromatography (GPC), SEC Profile:

Molecular weights were determined by Malvern OmniSec Reveal & Resolve GPC/SEC System equipped with Triple detector (RI, Viscometer, RALS 90° and LALS 7°) and two columns (PSS, SDV, 8x300 mm). DMF with 0.023M LiBr was the eluent. The flow rate was 0.7 ml/min.



P18547-S2VP

The <sup>1</sup>H NMR spectrum shows peaks in the aromatic region (6.5-7.5 ppm) and aliphatic region (1.5-3.5 ppm). Integration values of 1.00 and 6.98 are shown under the peaks at approximately 8.2 ppm and 6.8 ppm, respectively. A chemical structure of the polymer is shown above the spectrum, with a green circle highlighting the proton on the phenyl ring attached to the third carbon of the second repeating unit.