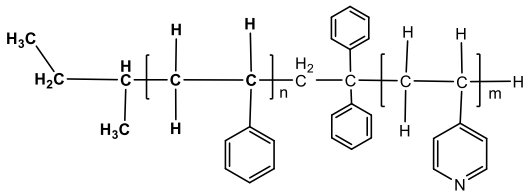
Product Profile

Identification

Product Name: Poly(styrene-b-4-vinyl-pyridine)
Product Lot Number: P10970-R-S4VP
CAS #: 26222-40-2
Product Chemical Architecture:



Composition:

Composition (S-b-4VP)	26,000-b-23,000
4VP mole%	47.1
Mn (g/mole)	49,000
Mw (g/mole)	71,000
Mw/Mn	1.44
dn/dc (mL/g) in DMF at 35 ºC	0.159

Method of Synthesis

The polymer is synthesized by anionic polymerization process.

Solubility in different solvents:

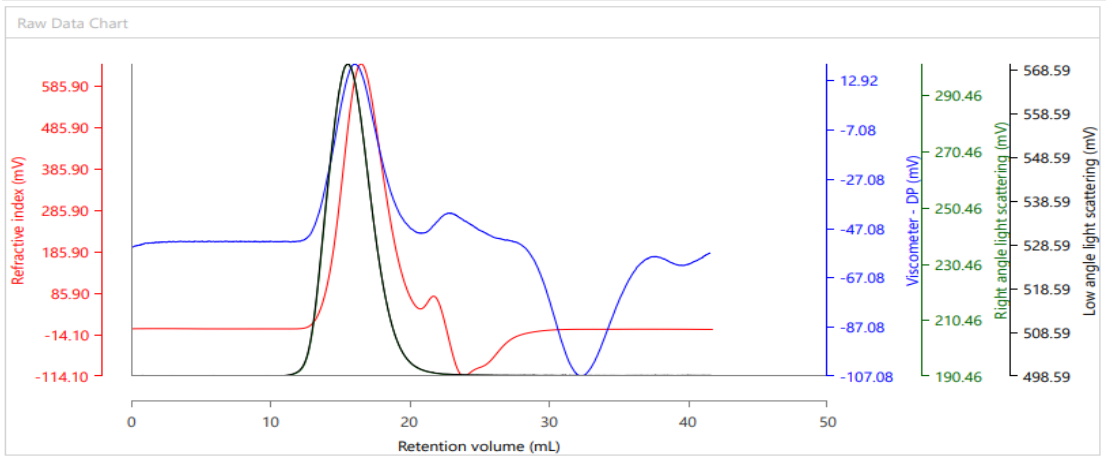
THF	**Depends on composition**	DMF	√
Alcohol	**Depends on composition**	$CHCl_3$	√
$Toluene_{(hot)}$	**X**	Water	**X**

Validation of Architecture

A. <u>Gel Permeation Chromatography (GPC), SEC Profile:</u>

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

Polymer Source Malvern Panalytical



Results (Rows)

Injection Name	RV (mL)	Mn (g/mol)	Mw (g/mol)	Mp (g/mol)	Mz (g/mol)	Mw/Mn
P10970, Injection 1, Peak 1	16.52	48,973	70,734	55,083	128,118	1.444

B. **NMR (H^1NMR) of S4VP in $CDCl_3$，500 MHz**