

Product Profile

Identification

Product Name: Poly(styrene-b-4-vinyl-pyridine)

Product Lot Number: P10997-R-S4VP

CAS #: 26222-40-2

Product Chemical Architecture:



Composition:

Composition (S-b-4VP)	36,000-b-41,000
4VP mole%	53.1
Mn (g/mole)	77,000
Mw (g/mole)	82,000
Mw/Mn	1.06
dn/dc (mL/g) in DMF at 35 °C	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

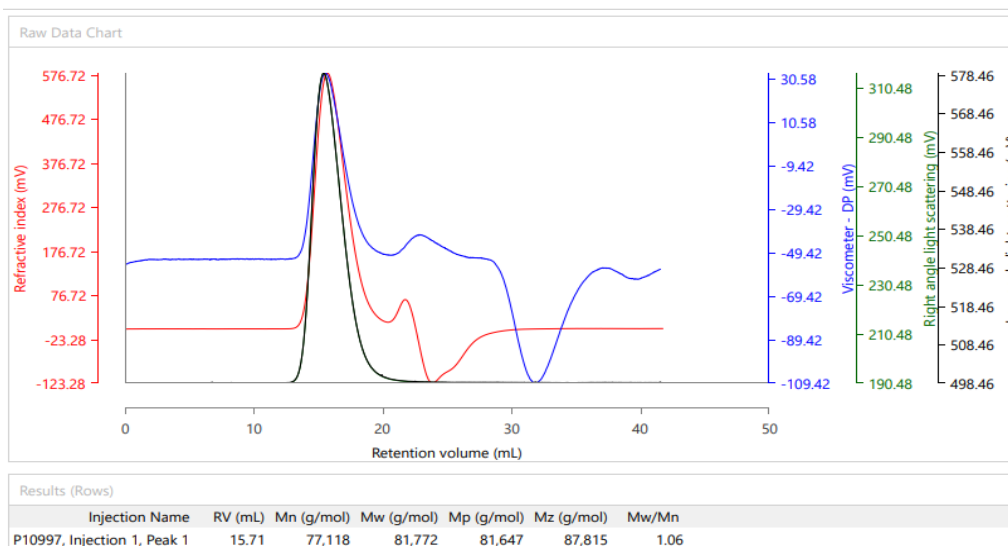
Validation of Architecture

A. 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.

Polymer Source

Malvern Panalytical



Chemical structure of P10997-S4VP (poly(10,9-phenylene-2,5-bis(vinylphenyl)pyrene)) is shown above the spectrum. The structure consists of a central pyrene unit (N) linked to two vinylphenyl groups (m) and two 10,9-phenylene groups (n). The spectrum displays two main peaks: a broad peak around 6.4 ppm (labeled 6.42) and a sharp peak around 8.3 ppm (labeled 2.01). The x-axis is labeled f1 (ppm) and ranges from 9.8 to 6.0. The y-axis represents intensity, ranging from -100 to 1700.