

Product Profile

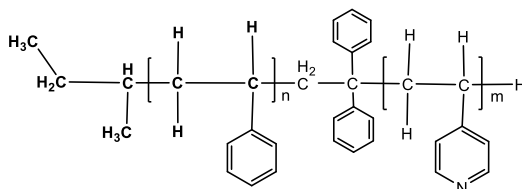
Identification

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

Product Lot Number: P18709-R-S4VP

CAS #: 26222-40-2

Product Chemical Architecture:



Composition:

| Composition (S-b-4VP) | 222,000-b-104,000 |
|------------------------------|-------------------|
| 4VP mole% | 31.9 |
| Mn (g/mole) | 326,000 |
| Mw (g/mole) | 339,000 |
| Mw/Mn | 1.04 |
| dn/dc (mL/g) in DMF at 35 °C | 0.161 |

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:

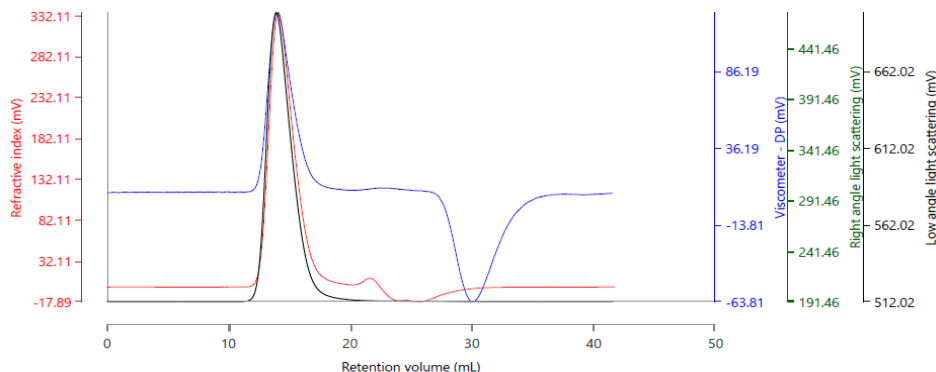
Molecular weights were determined by Malvern OmniSec Reveal & Resolve GPC/SEC System equipped with Triple detector (RI, Viscometer, RALS 90° and LALS 7°) and two columns (PSS, SDV, 8x300 mm). DMF with 0.023M LiBr was the eluent. The flow rate was 0.7 ml/min.

Polymer Source

Malvern Panalytical



Raw Data Chart



Results (Rows)

| Injection Name | RV (mL) | Mn (g/mol) | Mw (g/mol) | Mp (g/mol) | Mz (g/mol) | Mw/Mn |
|-----------------------------|---------|------------|------------|------------|------------|-------|
| P18709, Injection 1, Peak 1 | 14.09 | 326,436 | 338,728 | 333,313 | 355,054 | 1.038 |

B. NMR (^1H NMR) of S4VP in DMF, 500 MHz

P18709-S4VPrun in DMF

