

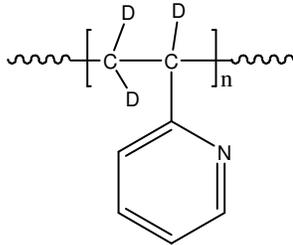
Sample Name:

Deuterated (d3) Poly(2-vinyl pyridine)

(ethyl groups are deuterated)

Sample #: P18878-d3P2VP

Structure:



Composition:

| | |
|----------------------|------|
| Mn x 10 ³ | PDI |
| 33.5 | 1.06 |

Synthesis Procedure:

The polymer was prepared by anionic living polymerization process.

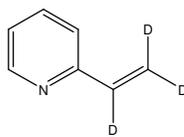
Characterization:

By size exclusion chromatography (SEC) in THF. SEC analysis was performed on a Varian liquid chromatograph equipped with refractive and UV light scattering detectors. Three SEC columns from Supelco (G6000-4000-2000 HXL) were used with triple detectors from Viscotek Co.

Solubility:

Polymer is soluble in DMF, THF, toluene, methanol, ethanol and CHCl₃. It precipitates from water and hexanes, ether.

Structure: For the monomer used

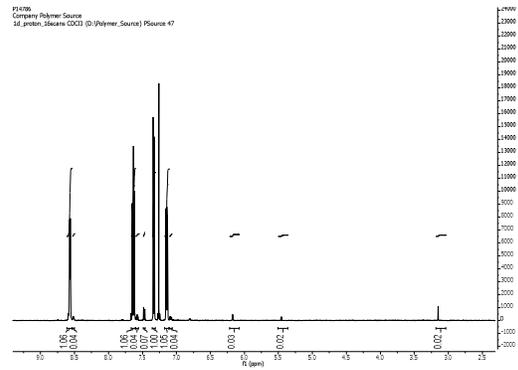


C₇H₄D₃N
Mol. Wt.: 108.16
2-vinylpyridine-d3 (P14786)

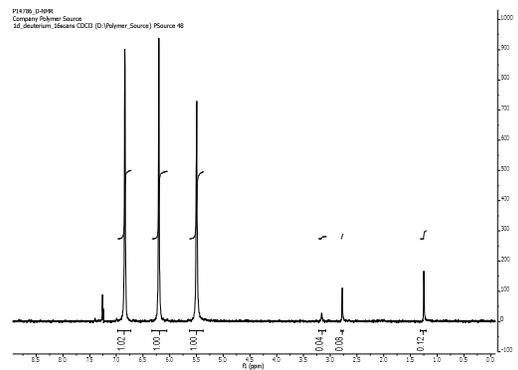
Characterization:

| | |
|-------------------------------|-------------|
| CAS | 352530-46-2 |
| D atom purity | 98 % |
| Chemical Purity | 90 % |
| 2-Ethynylpyridine (impurity) | 6 % |
| 2-Ethylpyridine-d5 (impurity) | 4% |

¹H NMR of P14786



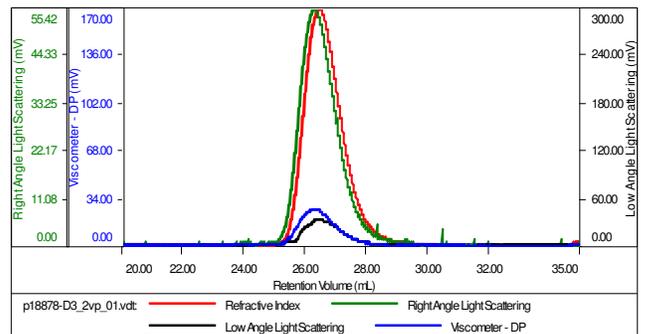
²D NMR of P14786



SEC elugram:

Sample ID: P18878-d3 2VP

| | |
|-----------------------|--------------------------|
| Concentration (mg/mL) | 3.1235 |
| Sample dn/dc (mL/g) | 0.1670 |
| Method File | PS80K-0903-2014-0000.vcm |
| Column Set | 3x PL 1113-6300 |
| Solvent | THF |



| Sample | MM Number Average (Da) | MM Weight Average (Da) | MM at Peak (Da) | Polydispersity | Intrinsic Viscosity (dL/g) |
|----------------------|------------------------|------------------------|-----------------|----------------|----------------------------|
| p18878-D3_2vp_01.vdt | 33,570 | 35,633 | 34,349 | 1.061 | 0.2318 |