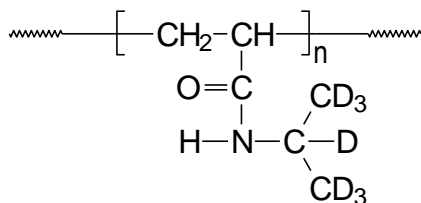


Sample Name:

**Deuterated Poly(N-isopropyl acrylamide)**

Sample #: **P41420-d7NIPAM**

**Structure:**

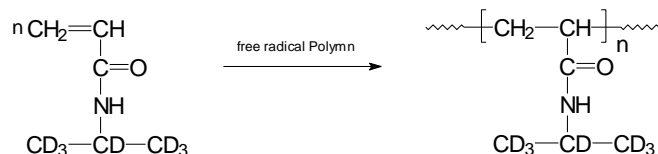


**Composition:**

Mn x 10 <sup>3</sup>	PDI
452.0	1.35

**Synthesis Procedure:**

Polymer was obtained by free radical polymerization. Scheme of the polymerization is illustrated below:



**Characterization:**

Size exclusion chromatography (SEC) was carried out on a Varian liquid chromatograph equipped with a refractive index detector. A Shodex 806L GPC columns from Supelco was used with DMF(0.01M LiBr) as the eluent. The columns were calibrated with monodisperse polystyrene standards. The polydispersity index was calculated.

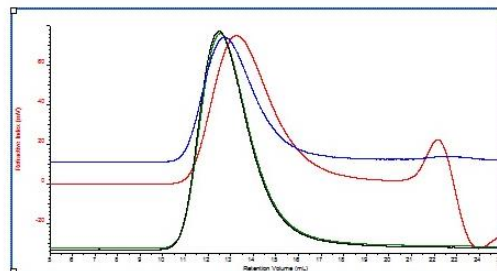
Viscosity measurement was carried out in a Ubbelohde viscometer at 25°C. Four solutions in methanol of different concentrations were measured. The intrinsic viscosity was obtained by extrapolation to c=0. From viscosity-molecular weight relationship  $[\eta]=2.99 \times 10^{-2} M^{0.64}$  (Makromolecular Chem. V180, P969, 1979), the viscosity average molecular weight was calculated accordingly.

Absolute molecular weight was measured by light scattering with  $dn/dc = 0.1800 \text{ ml/g}$  at 632.8nm in methanol. The molecular weight was obtained by a Zimm plot analysis.

**SEC elugram:**

**P41420-d7NIPAM**

dn/dc	0.0650
Flow	0.7000
Solvent	DMF with LiBr
Method	PSS old column-Oct2018-0004.vcm



Sample	Mn	Mw	Mz	IV	Mw/Mn
P41420 1 2018-10-25	452,612	621,902	979,602	0.9118	1.374