

Poly (Methylmethacrylate-b-Acrylonitrile)

PMMA block rich in Syndiotactic fraction

$$\left[\text{CH}_2 - \underset{\begin{array}{c} \text{C}=\text{O} \\ | \\ \text{O} \\ | \\ \text{CH}_3 \end{array}}{\overset{\text{CH}_3}{\text{C}}} \right]_n \text{ b } \left[\text{CH}_2 - \underset{\begin{array}{c} \text{C} \equiv \text{N} \\ | \\ \text{N} \end{array}}{\overset{\text{H}}{\text{C}}} \right]_m$$

Mn $\times 10^3$ MMA-b-ACN	Mw/Mn (PDI)
31.0-b-25.0	1.27
Color of the Product : Ivory color	

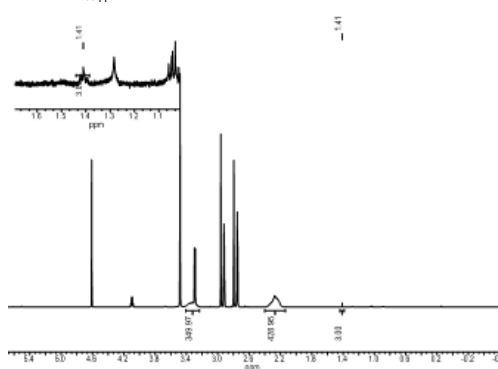
PACN-Br macroinitiator prepared by controlled radical process in ethylene carbonate as solvent.

The polymer was characterized by ¹H NMR and size exclusion chromatography (SEC) in DMF. Composition determined by HNMR and Distribution in DMF by GPC.

CC#NCC(C#N)CC(C#N)CC(C#N)Br

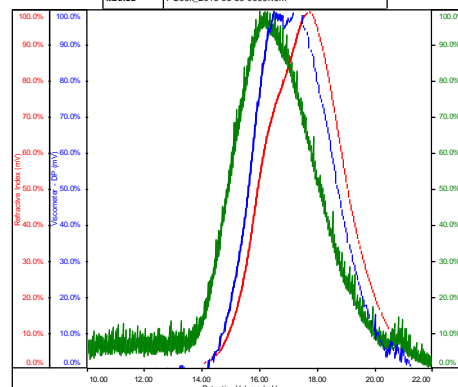
Chemical structure of poly(4-bromobenzonitrile) with assigned ¹H NMR chemical shifts (ppm):

- 1.41 ppm (CH₃)
- 2.27 ppm (CH₂)
- 2.66 ppm (CH)
- 3.31 ppm (CH)
- 3.55 ppm (CH-Br)



P40200BC-ACN-Br For P41245

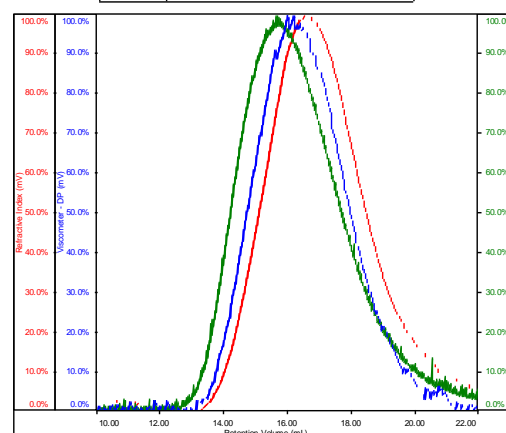
Conc	10.7323
dn/dc	0.0920
Solvent	DMF w 0.023M LiBr
Flow Rate	0.7000
Method	PS99k_2018-05-30-0000.vcm



Sample	Mn	Mw	Mp	Mw/Mn	IV
P40200BC-ACN-BR_01.vdt	24,910	36,427	21,449	1.462	0.9435

P41245-2

Conc	8.8290
dn/dc	0.0880
Solv ent	DMF w 0.023M LiBr
Flow Rate	0.7000
Method	PS99k_2018-05-30-0000.vcm



Sample	Mn	Mw	Mp	Mw/Mn	IV
P41245-MMAACN_01.vdt	56,278	71,445	58,165	1.269	1.1546