

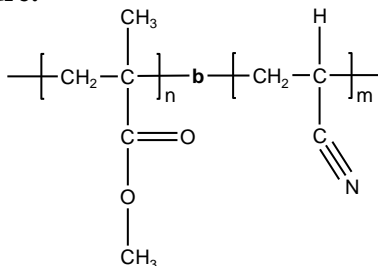
Sample Name:

**Poly (Methylmethacrylate-b-Acrylonitrile)**

Sample #: **P41211-MMAACN**

*PMMA block rich in Syndiotactic fraction*

**Structure:**



**Composition:**

$M_n \times 10^3$ MMA-b-ACN	Mw/Mn (PDI)
20.0-b-19.5	1.5

Color of the Product : orange in color

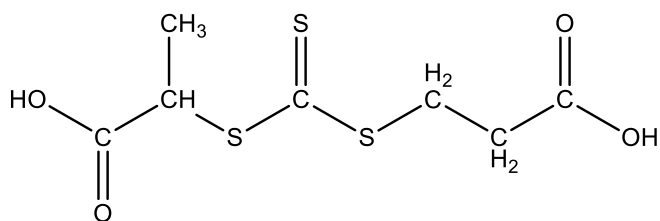
**Synthesis Procedure:**

The polymer is prepared by RAFT controlled radical polymerization process.

PACN-RAFT macroinitiator prepared by ethylene carbonate as solvent.

Following RAFT catalyst used:

**Structure:**



Chemical Formula:  $C_7H_{10}O_4S_3$

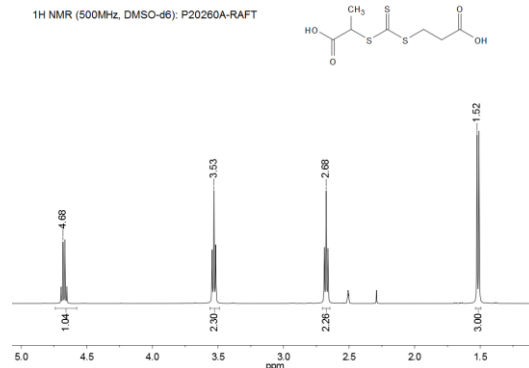
Molecular Weight: 254.3

Purity:	> 95 %
Storage temperature:	2–8°C

**Characterization:**

The chemical structure of the product was confirmed by FT-IR and  $^1H$  NMR.

**$^1H$  NMR (500 MHz, DMSO- $d_6$ ):**

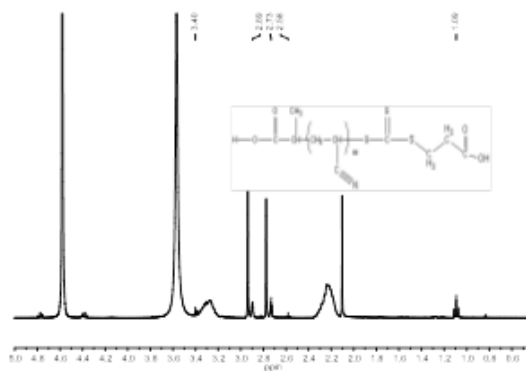


**Characterization:**

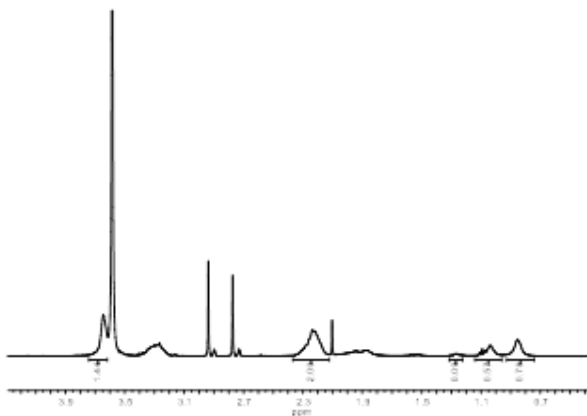
The polymer was characterized by  $^1H$  NMR and size exclusion chromatography (SEC) in DMF.

Composition determined by HNMR and Distribution by GPC runs in DMF.

**$^1H$  NMR spectrum of the PACN-RAFT Macroinitiator in DMF:**

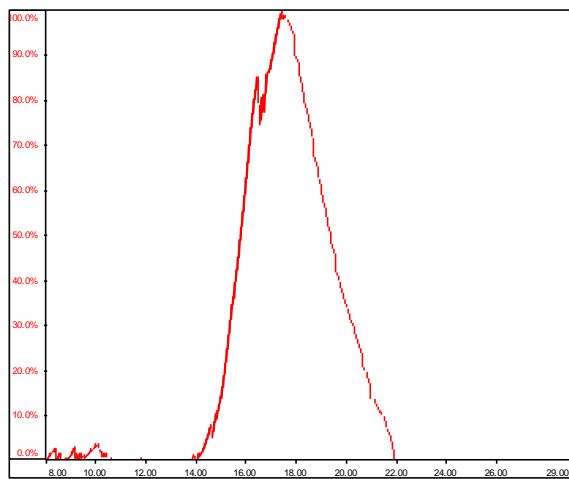


**$^1H$  NMR spectrum of the Block copolymer in DMF:**



**SEC elugram of the PACN-RAFT macroinitiator used:**

Conc	2.4993
dn/dc	0.0840
Solvent	DMF w 0.023M LiBr
Flow Rate	0.7000
Method	PS99k_2018-05-30-0000.vcm

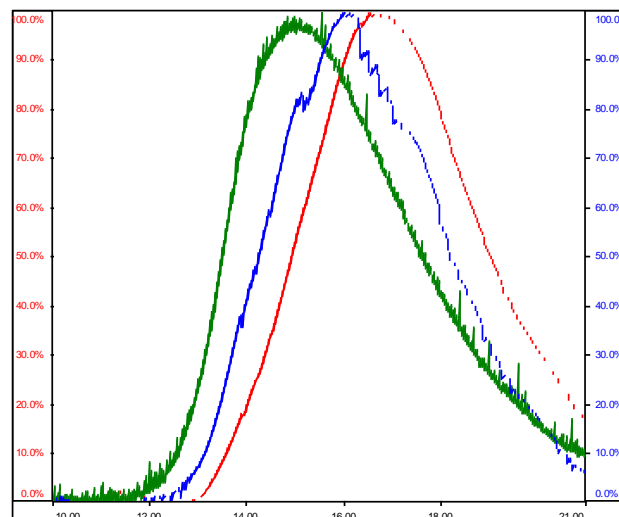


Sample	Mn	Mw	Mp	Mw/Mn	IV
P41208-ACN-RAFT_01.vdt	19,634	28,109	18,692	1.432	0.8388

**SEC elugram of the diblock copolymer:**

**P41211-MMAACN**

Conc	9.1309
dn/dc	0.0720
Solvent	DMF w 0.023M LiBr
Flow Rate	0.7000
Method	PS99k_2018-05-30-0000.vcm



Sample	Mn	Mw	Mp	Mw/Mn	IV
P41211-2_01.vdt	38,745	56,433	37,602	1.457	0.9139