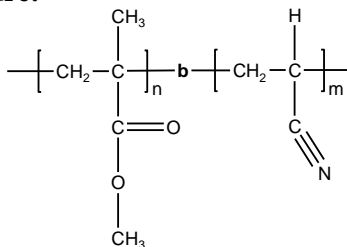Sample Name:
Poly (Methylmethacrylate-b-Acrylonitrile)

Sample #: **P41208-MMAACN**
PMMA block rich in Syndiotactic fraction

Structure:

Composition:

Mn × 10³ MMA-b-ACN	Mw/Mn (PDI)
10.0-b-19.5	1.3

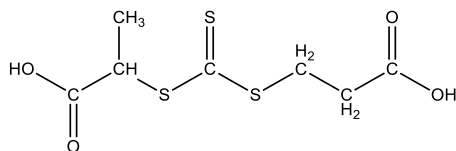| Color of the Product : ivory in color |
|---|

Synthesis Procedure:
The polymer is prepared by RAFT controlled radical polymerization process.
PACN-RAFT macroinitiator prepared by ethylene carbonate as solvent.
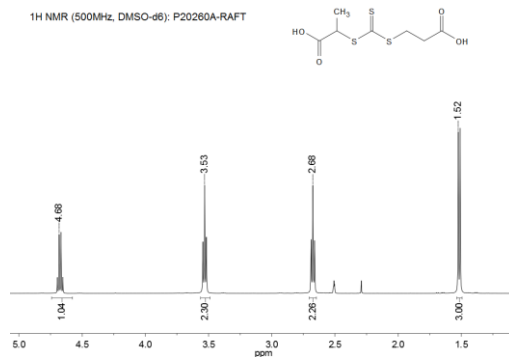
Following RAFT catalyst used:
Structure:

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 ^{1}H NMR.
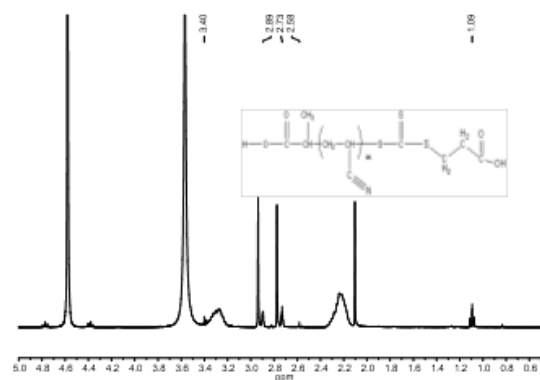
^{1}H NMR (500 MHz, DMSO-d₆):
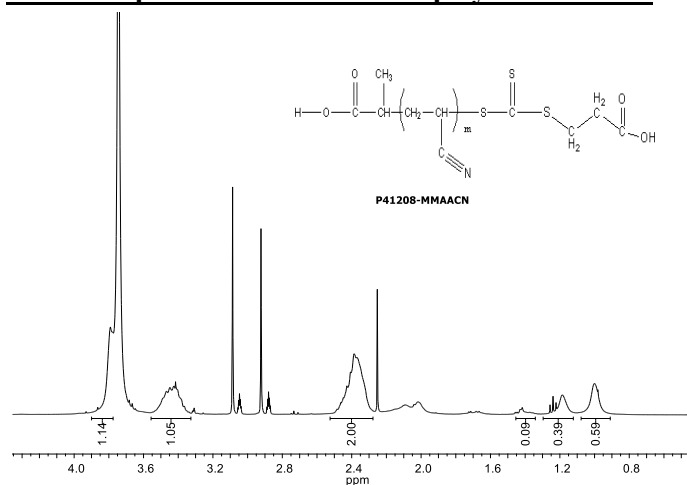

Characterization:
The polymer was characterized by ^{1}H NMR and size exclusion chromatography (SEC) in DMF.
Composition determined by HNMR and Distribution by GPC runs in DMF.

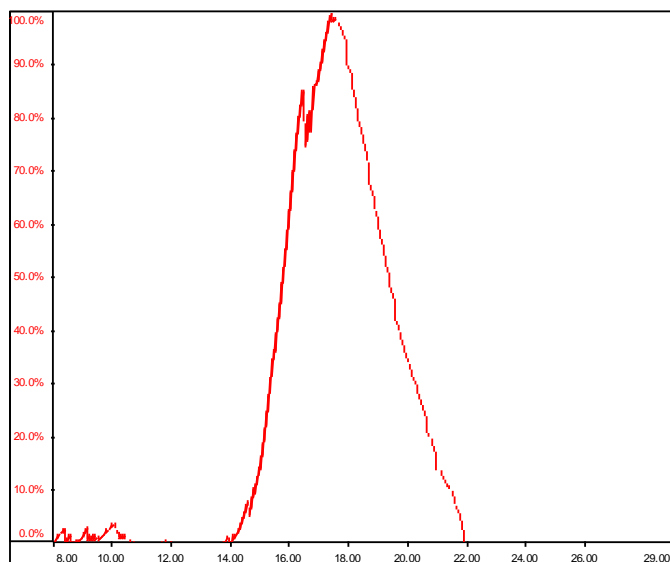**^{1}H NMR spectrum of the PACN-RAFT Macroinitiator in DMF:**

^{1}H NMR spectrum of the Block copolymer in DMF:

SEC elugram of the PACN-RAFT macroinitiator in DMF:

P41208-ACN-RAFT

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:

P41208-MMAACN

Conc	2.5582
dn/dc	0.0880
Solvent	DMF w 0.023M LiBr
Flow Rate	0.7000
Method	PS99k_2018-05-30-0000.vcm
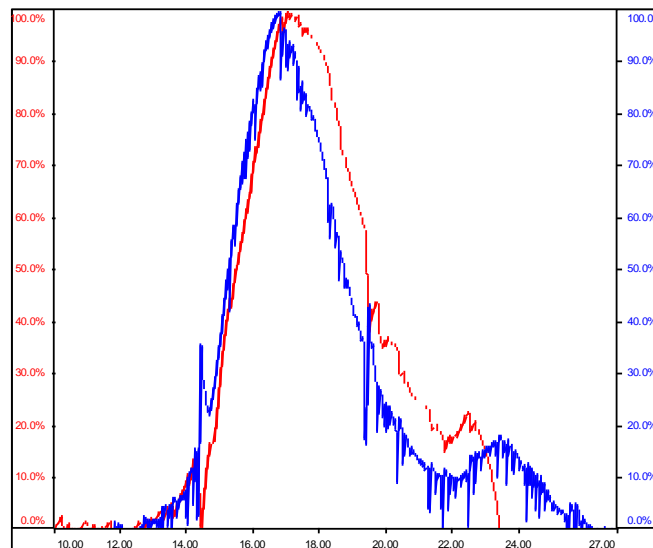
Sample	Mn	Mw	Mp	Mw/Mn	IV
P41208-2_01.vdt	29,552	38,392	31,061	1.299	0.7743