

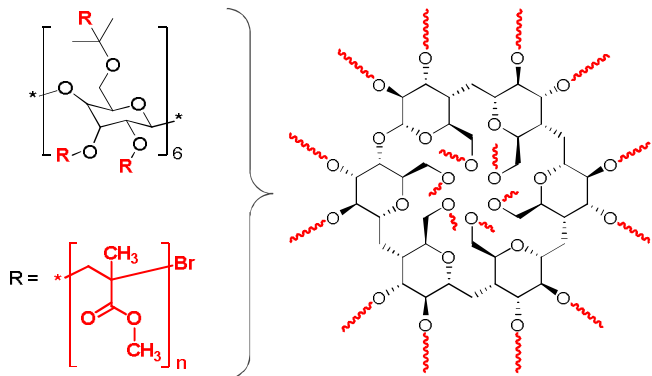
Sample Name:

Star-like Poly(Methyl Methacrylate) with α -Cyclodextrin core

Number of arms: 16 arms

Sample # **P20136-16MMA**

Structure:



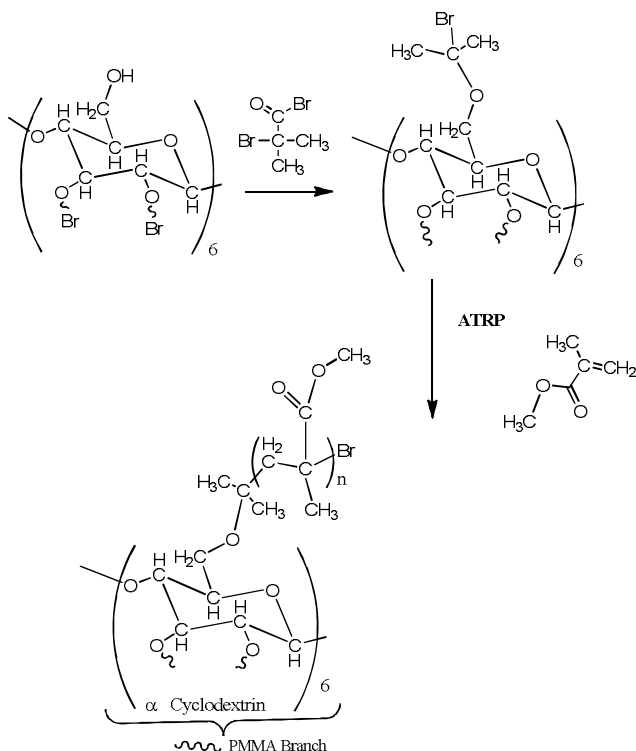
In star-like polymer that contains <18 arms, some R = H (hydrogen).

Composition:

Mn x 10 ³	PDI
Total: 312.0	1.4
Each branch: 20.0	1.4

Synthesis Procedure:

The polymer was synthesized by ATRP process:



Characterization:

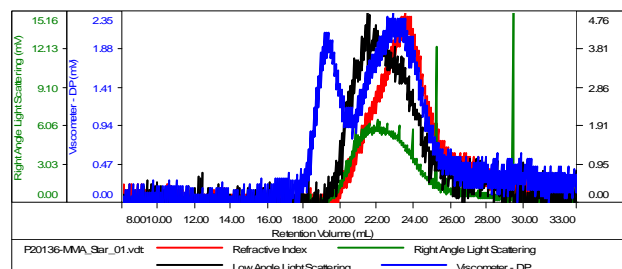
Molecular weight and polydispersity index were determined by size exclusion chromatography (SEC): The absolute molecular weight of the star-like polymer was determined by light scattering detector-Viscotek 270 model.

To analyze the molecular weight of the arms consisting of PMMA, the ester groups located between cyclodextrin and PMMA block were cut by hydrolysis in the basic condition.

SEC elugram of star polymer:

Sample ID: P20136-MMA star

Concentration (mg/mL)	0.9083
Sample dn/dc (mL/g)	0.0840
Method File	PS80K-NDV-2014-0003.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	MW Number Average (Da)	MW Weight Average (Da)	MW at Peak (Da)	Polydispersity	Intrinsic Viscosity (dL/g)
P20136-MMA_Star_01.vcl	311,843	448,022	272,623	1.437	0.2354