

m-
14,15
moiety
m-
moiety 가

가 *m*- 가

m- moiety 가

moiety
m- ,

(Aldrich)
(TEA, Aldrich)
m- (Aldrich)
(AIBN)

(THF)

(AA)
copper stearate
(MMA) 5%
1000
Spectrum Medical

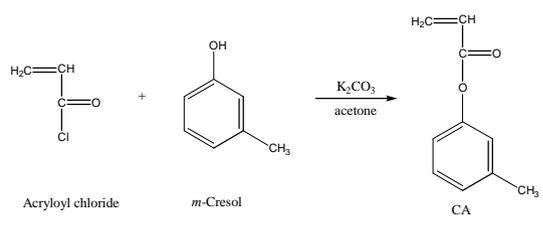
m- moiety 가 cresyl
acrylate (CA) Scheme 1
m-
) K_2CO_3 13.8 g (0.1) 10.5 mL (0.1) 100 mL
) 0 8.8 mL (0.12
5 5

anti - itching

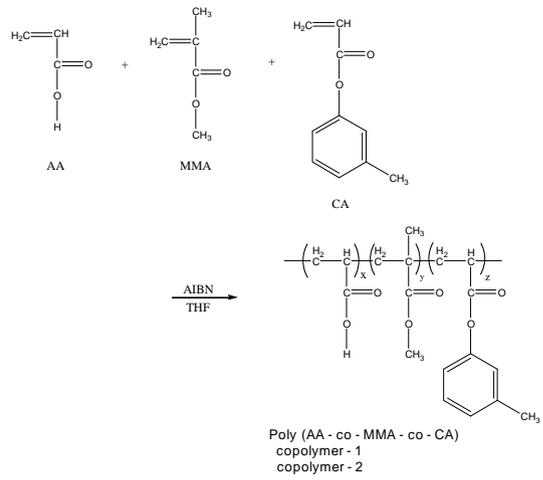
m-

가

가



Scheme 1. Synthesis of CA.



Scheme 2. Terpolymerization of AA - MMA - CA.

1.4 mmHg 54 56 ()
 16 : 70.5 /1.5 mmHg) 12.9 g ()
80%)
poly(AA - *co* - MMA - *co* - CA) Scheme 2

- 1 AA, MMA
CA 3가 0.41 g (10 mol%) : 5.41 g (85 mol%) : 0.49 g (5 mol%) - 2
3 0.41 g (10 mol%) : 5.09 g (80 mol%) : 0.97 g (10 mol%)
THF 20 mL 3가
 1×10^{-2} AIBN 가
50 mL
65 48 가
n-

m - Moiety 가

(NMR)
 Bruker Avance Digital 400 NMR
 Hewlett Packard 5908
 Dupont 2100 (TGA)
 30 /min
 (T_g) Dupont 2000
 (DSC) 20 /min
 가
 m -

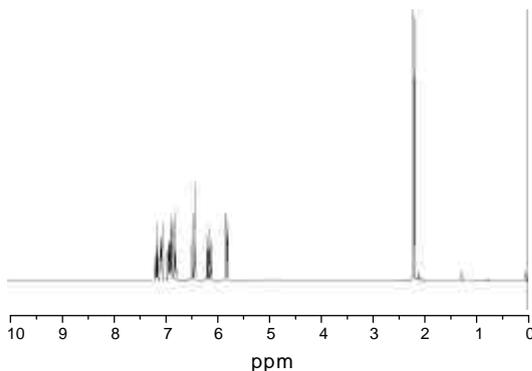


Figure 1. ¹H - NMR spectrum of CA in CDCl₃.

pH 5, 7 9 m -
 Shimadzu UV - 2100
 THF
 Waters Alliance 2000
 (GPC) 10,17
 100 mesh
 20 mg
 20 mL가
 30
 3 mL
 UV
 3 mL

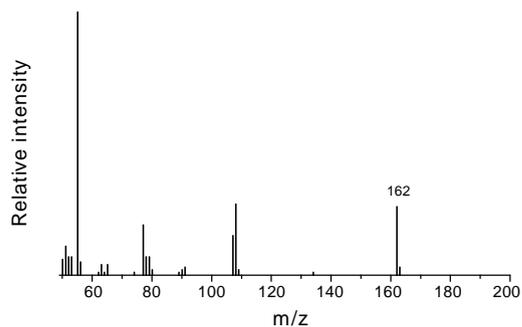


Figure 2. Mass spectrum of CA.

S. aureus *E. coli*
 12 mm 0.2 g pH 7
 10 mL 10⁴
 100 mL 가 18
 6 100 mL
 37 24 colony

2.2 ppm
 6.0 ppm 6.6 ppm
 6.3 ppm
 6.9 7.3 ppm
 Figure 2
 CA 162 CA
 CA가
 CA 10 mol%
 -2 NMR Figure 3
 NMR
 0.8 1.1 ppm
 MMA
 2.4 ppm CA
 3.7

Figure 1

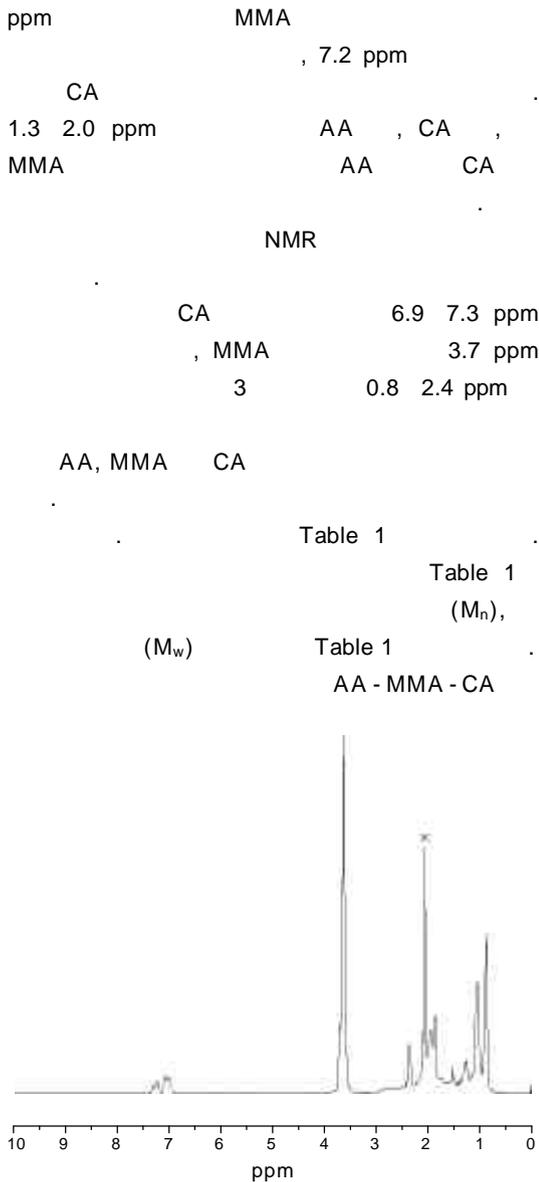


Figure 3. ¹H - NMR spectrum of the copolymer - 2.

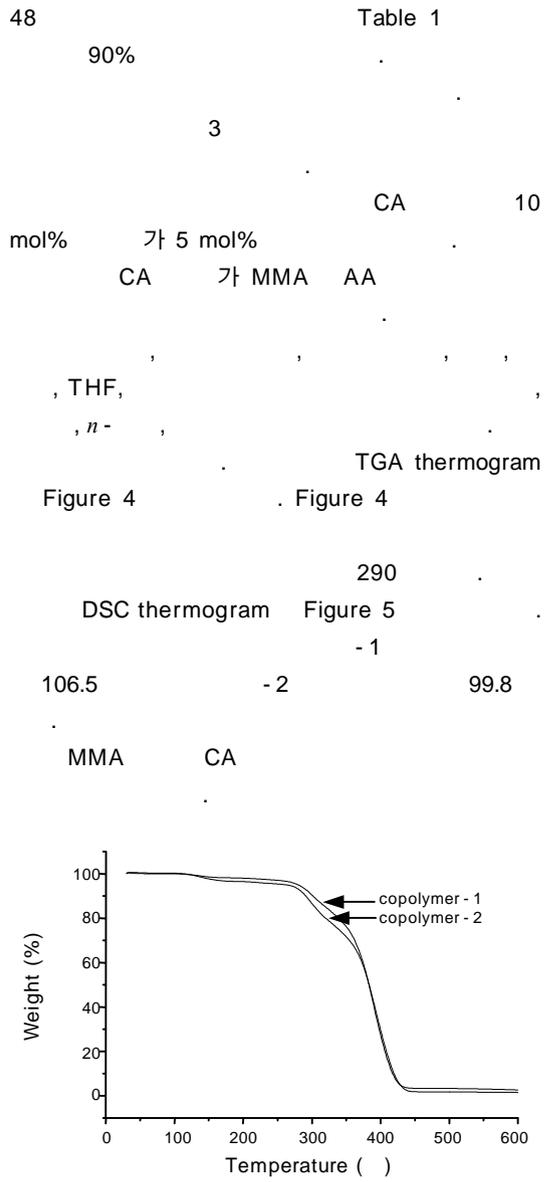


Figure 4. TGA thermograms of the copolymers.

Table 1. Characterization of the Copolymers

copolymer	feed composition		yield(%)	copolymer composition ^a			
	[AA]:[MMA]:[CA] (mol %)			[AA]:[MMA]:[CA] (mol %)	M _n ^b	M _w ^b	M _w /M _n
copolymer - 1	10 : 85 : 5		95	8.7 : 86.6 : 4.7	14,800	38,900	2.6
copolymer - 2	10 : 80 : 10		93	8.8 : 81.1 : 10.1	12,300	36,300	3.0

^a Determined by NMR spectroscopy. ^b Measured in THF with GPC.

pH 5, 7, 9
 13%, 15%, 23% . pH 가
 m - - 1
 moiety
 - 2가 moiety
 - 1 m -
 moiety가
 - 2가 - 1
 10,17 m -
 pH
 m -
 pH CA - 1
 - 2 CA, AA
 MMA CA
 가 . E.
 coli S. aureus
 Figure 8 CA 4.7
 mol% - 1
 31% 63%
 CA 10.1 mol% - 2
 18%
 51%
 moiety - 2
 moiety - 1
 m -

- 1 - 2
 m -
 moiety
 CA m -
 3
 moiety
 CA 4.7 mol%
 10.1 mol%
 290 100 106
 12000 15000
 CA 가 CA
 m - - 1
 - 2
 pH 가 가
 pH 가
 S. aureus 51% 63%
 E. coli
 18% 31%

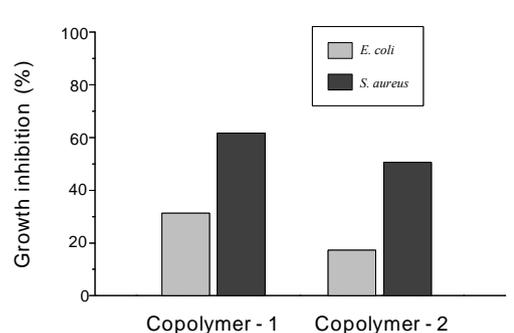


Figure 8. Microbe growth inhibition by the copolymers after 6 hr of shaking.

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