

가

1.

“ 가 ”

가 .
,
.

2.

가

.
TEGEWA
,

가 가 .

2005 TEGEWA Morapex

.

가 .

DIN 54285 ,

.

DIN 54285

가 Morapex S
Morapex S (Werner
Mathis AG)
30 98
5mL

. < 1>

< 1> Morapex

.	Morapex S
.	3
	(, 1g 2~3 .)
	5g/l NaOH 100% 10g/l DTPMP 25%, pH 4-5
.	98 4 , 1 30 (5ml)
.	98 2 , 1 30 (5ml)
.	105 , 4

가 . DIN 54285

가

DTPMP(dimethylenetriamine pentaphosphonate) 가

가

(aminocarboxylate)

(phosphonate)

(chelating)

가

(polyacrylate)가

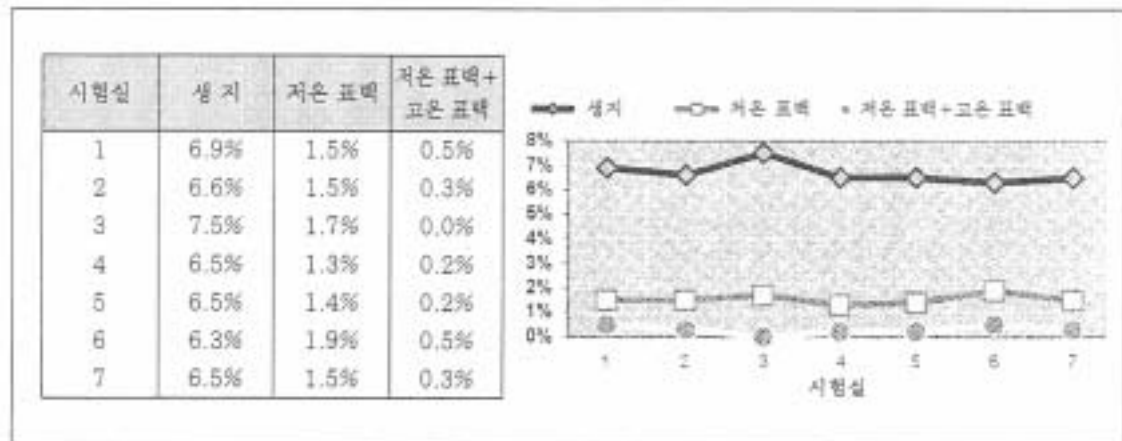
$$(\%) = \frac{(\quad - \quad) - (\quad)}{(\quad - \quad)} \times 100$$

Morapex S

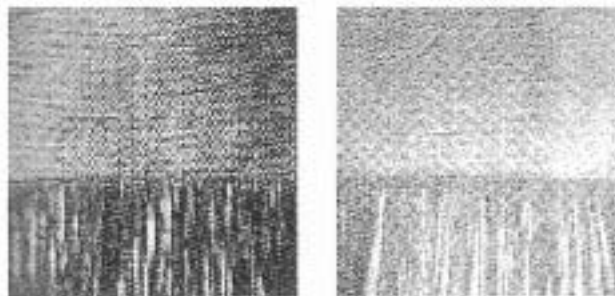
20 1

가

. (: 가 100%, , ,
+)



< 1>



< 2>

< 1>.

가 가 ,

(acrylate) / (starch) ,

CMC 가 < 2> . ,

PVA 가

. Morapex S 5g/L

(fatty alcohol ethoxylate 12 EO), 5g/l DTPMP 25%

pH 4-5

98

3 , 30 / (5mL)가

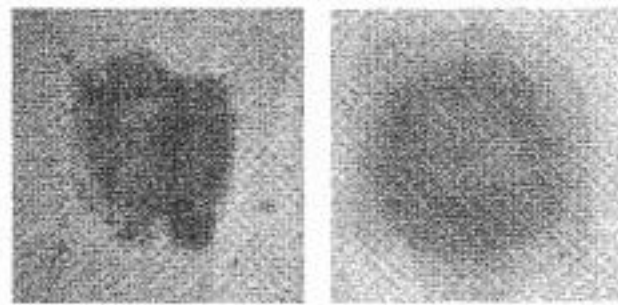
가

(cloud point) 90

가

< 3> Morapex S

/



< 3>

/

PVA

Morapex S

· 5g/L α - (α-amylase)

· 5g/L (fatty alcohol ethoxylate 12 EO)

98 3 , 30 / (5ml)

3.

1g

5g

10g

가