

(19) (KR)
(12) (A)

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(71) -

(75013) 174

(72) , - 78650 33

22422 44

- 91410

(74)

10

(54)

1 (pulse) (30) 2 (50 20
0) ,
(timed dual release)

1

(timed dual release)

— (1990) *Mathematics in the Early Americas:堕落的数学* (R) — (1990) *Mathematics in the Early Americas:堕落的数学* (R)

$$\vdash \quad \left(\quad \vdash \quad \right)$$

2 (pulse)가

, 1 , 1 2
 , ,
 " "
 () 1 30 , pH 1 7.5, 37
 , 50rpm , 가
 30 90% 20 , 15
 1 , 30
 , $T_1 - T_2$
 $T_1 - 2$, 10%
 T_2 , 85%
 , $(T_2 - T_1)$ 30 200
 , 50 200 , 60 150
 " "
 , , , , 8
 , $T_2 - 2$ 6 ,
 2.5 5
 40 70%
 90 (T_1) 가 1 , 60% , 2
 2 , 2 , 2 ()
 , , , , 30
 , , , , 30

, 30 90%
30 0 20%, 0 5%

2

, 10 30mg 7.0 15mg

4 16mg,
6 12mg 가

2 pH

가 기

가 , , , ()

(1) , , , 0.2 2mm

(spheronisation),

(i) (iii) :

가

(i) 1 (: , , ,) B ,

1 (:
A) . , ,

(ii) () , (i) () A B)
4

(iii) , , , ,
1 , , , ,

, 1 가
(zwitterionic) 가 . 가

가 가 , ,

, (CTAB), (DDAB(12)),

N - , C - , N - (:),
N -

2, 3 5

1 가 () ,

가 , , 1 가 , ,

pH

(2)

(1)

(3) (1)

(4) 1 1 .

가 가 , 가 가 ,

가

, 가

가 . ,

가

가

가

가 , ()

(spirits), (liqueurs),

가

가

AC,

(, ,)

가

가

1 40% , 90 150 , 60% , 2

2 1 (pH 2.0).

3 2 (pH 2 6.8).

4 3 (pH 2 6.8).

5 1 7.5mg 3 4 (, (pH 2.0).

6 1 (pH 2 6.8).

7 2 (pH 2 6.8).

8 5

1:

(nonpareil) 16/18 1000g

:

[1]

	11.54%	78.125g
K30 ¹	11.54%	78.125g
	76.92%	520.8g
¹ BASF (Kollidon,)		

GPCG1 ((Glatt))
50rpm

37 ± 0.5 0.01M 900MΩ

310nm

2

2: , ,

16/18 1000g

[2]

	6.0%	78g
1	4.0%	53g
	3.0%	39g
	43.5%	567g
	43.5%	567g
¹ (Pharmacoat,) 603		

, GPCG1 , 가

[3]

	8.3%	78g
K30 ²	8.3%	78g
	83.4%	784g
² BASF		

[4]

B ³	11.40%	83.4g
A ⁴	0.93%	6.8g
5	1.37%	10.0g
	51.80%	379.0g
	34.50%	252.0g
³ (Rohm Pharma) (Eudragit,) RS100 ⁴		RL100 ⁵
(Eudraflex,)		

1 0.01M 0.1M 0.02M pH 6.8

3

3: , , ,

16/18 1000g :

[5]

	6.0%	78.0g
1	4.0%	53.0g
	3.0%	39.0g
2	1.4%	18.2g
	42.8%	557.0g
	42.8%	557.0g
1 -	603 ²	

, GPCG1

2

4

4:

15mg

[6]

	/	
1	112mg	7.5mg
3	131mg	7.5mg
3		-
()		15.0mg

2

0.01M

5

T₁ = 2.0h T₂ = 5.0h

1:

GPCG1

1

850g

[7]

B ¹	11.41%	129.6g
A ²	0.92%	10.5g
3	1.37%	15.6g
	51.78%	588.0g
	34.52%	392.0g
3	RS100 ⁴	RL100 ⁵

35

24

2

0.01M

0.1M

pH 6.8 0.02M

6

0.01M

(12)

가

pH 6.8

2:

16/18 735g :

[8]

	10%	58.4g
K30 ¹	2%	11.5g
95%	88%	505.0g

GPCG1

[9]

	11.54%	78.125g
K30 ²	11.54%	78.125g
	76.92%	520.8g
² BASF		

748g

[10]

B ³	11.40%	62.5g
A ⁴	0.93%	5.1g
5	1.37%	7.5g
	51.80%	283.5g
	34.50%	189.0g

35

24

pH 6.8 0.02M

pH

pH

가가

pH

pH

가

5:

GPCG1

[11]

	5.0%	78.0g
¹	2.5%	39.0g
VA 64 ²	5.0%	78.0g
	5.0%	78.0g
	41.25%	643.5g
95 °	41.25%	643.5g

가

[12]

	8.3%	78g
VA 64 ³	8.3%	78g
95 °	83.4%	784g

1000g

[13]

B ⁴	11.40%	83.4g
A ⁵	0.93%	6.8g
6	1.37%	10g
	51.80%	379g
	34.50%	252g

30 16 , 100rpm
0.01M 37 ± 0.5 0.01M 900
Mf . 310nm 8

6: 6.5mg - 6mg

3

[14]

			3.0%
			20.0%
1			68.0%
	606		3.0%
2			5.0%
			1.0%
¹ FMC	(Avicel,) ² BASF	CL

, 가 130mg 217mg

(57)

1.

, 37

1 (pulse)

2

dual release)

(timed

2.

1 , 1 가 30

가

3.

1 2 , 50 200

4.

3 , 60 150

5.

1 4 , 40 70%가

6.

1 5 , 가 30 200

7.

1 6 , 85%가 2 6

8.

9.

8

, , , ,

10.

8 9 , 1

11.

8 9 ,

12.

8 9 ,

13.

8 9 ,
, (i) 가 , (ii)
, (iii) , (iv) 가

14.

10 13 , 가 1

15.

10 13 , 가 1
(zwitterionic)

16.

14 , 가 , , , , , ,

17.

15 , 가 N- , C- , N- , N- ,

18.

16 , 가

19.

8

20.

18

21

1 20 간

22

21 , 가 , , , , , (R) - , , , .

23.

21 . 가 가

24.

23

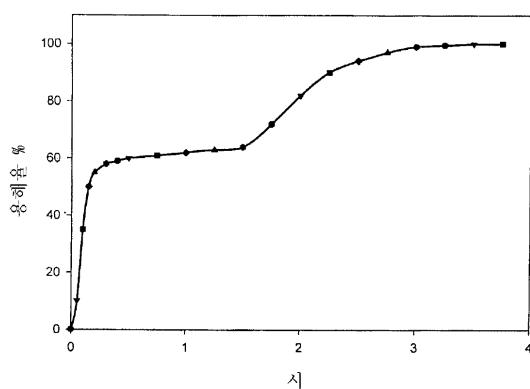
25.

1 24

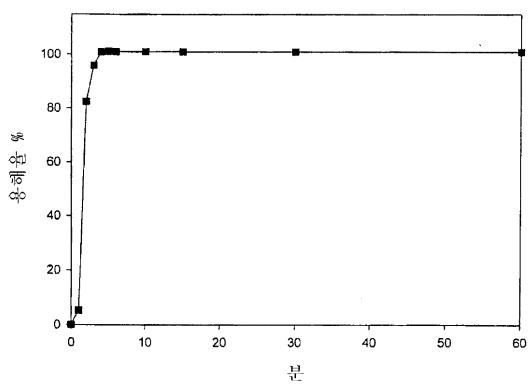
26

25 , , , , , 가 , .
()

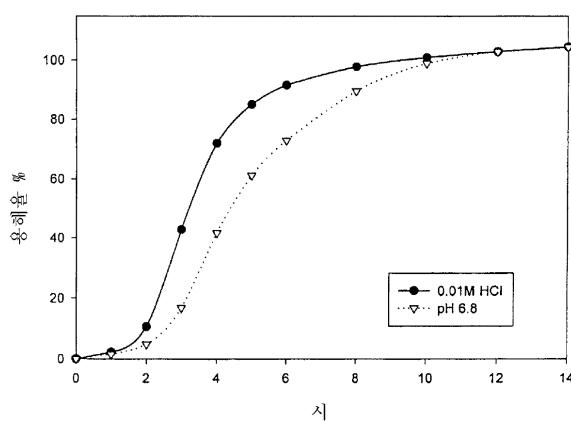
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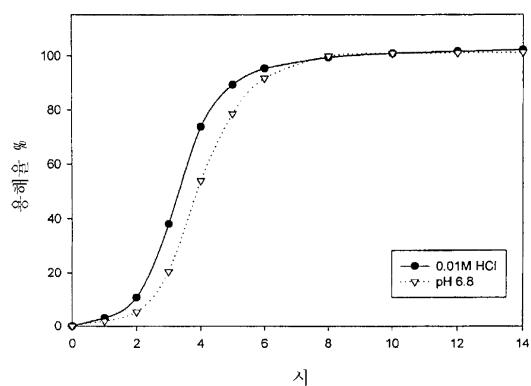
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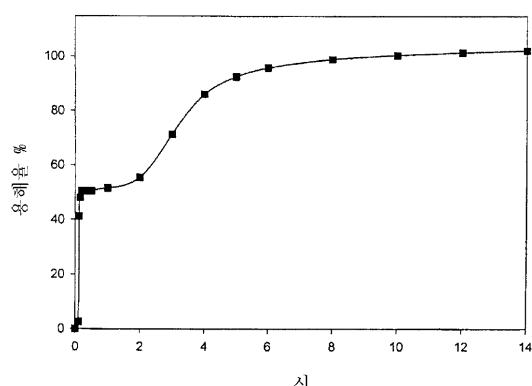
3



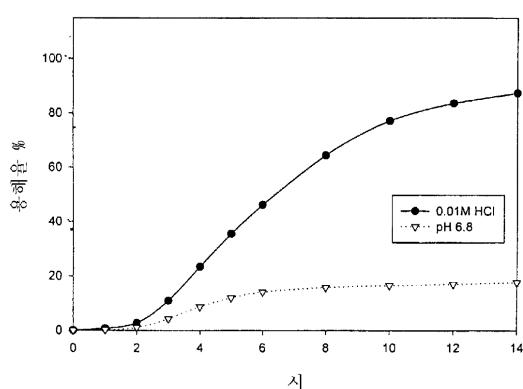
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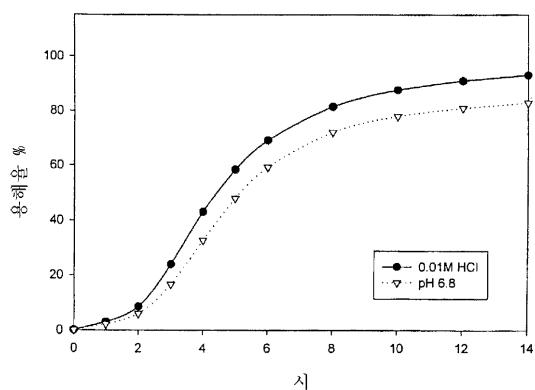
5



6



7



8

