

- (7) -

3.3

, ,

4가

.

(1) K (NK)

가 . 가

가 20~30

. , 40~50 . K

Kalt(cold) .

(2) W (NW)

. , N

가 40~50 . W

Warm .

(3) N (NN)

가 가 55~60 가

N Normal

(4) (NNS)

NN

, NK, NW, NN, NNS

N 佳友化藥 Nihonthrene N

Indanthrene IK, IW, IN , Mikethrene MK, MW,

MN

< 16>

< 16>

		40°Bé NaOH(ml/l)								
		(1:20)	(1:5)							
	NK	1~2	4~8	0~10		45~50	20~25			
	NW	2~3	5~15	0~10		45~50	40~50			
	NN	6~10	20~35	30~60		55~60	55~60			
	NNS	10~20	30~45	30~60		55~60	60~70			

3.4

< 17> .

Dispersed powder, Super fine, Colloisol, Microdisperse
powder .

< 17>

佳友	Nihonthrene	
DyStar	Indanthrene Mikethrene Solanthrene Caledon SF	Indigo Brilliant Indigo
Ciba	Cibalon	

3.5

(1)

5 .

.

.

.

.

.

,

가 .

1)

.

< 18> .

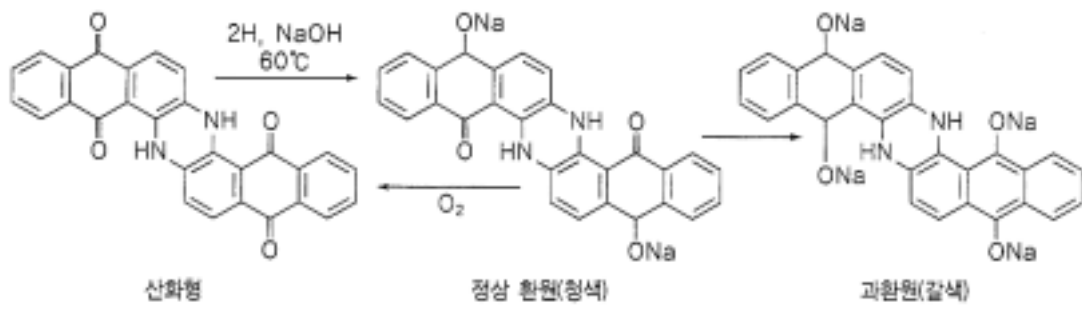
< 18>

			,
		가 ,	
		,	,
.		,	,

a)

가 .

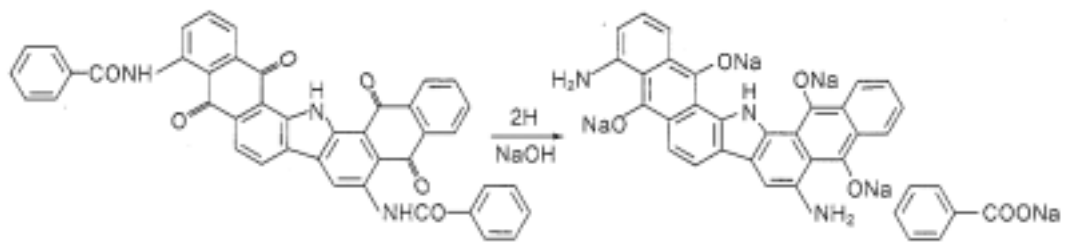
.



b) 가

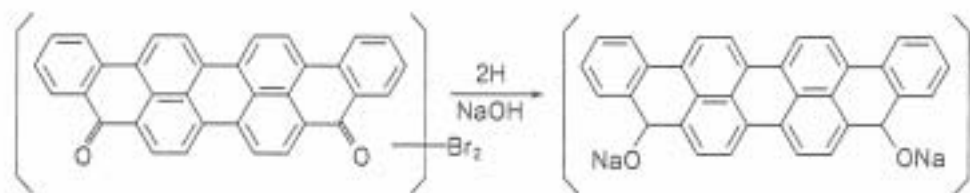
가 가

가 .

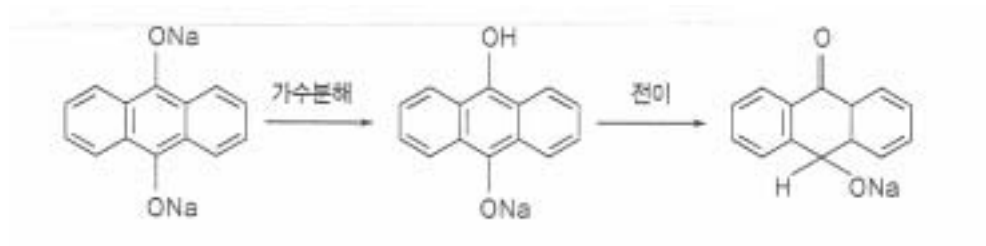


c)

가 가 가



d) ()
가 가 가 pH가
가 .



e) , 가
가 .

2)

.

가

.

가

.

3)

가 .

가

,

.

(2)

1)

(

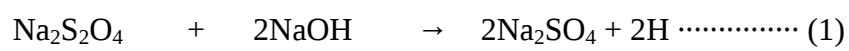
) 가

가

.

($\text{Na}_2\text{S}_2\text{O}_4$:Sodium hydrosulfite, Sodium dithionite) ~

.



(MW = 174.11) (MW = 40 ×)

,

1,000l

3.5kg

가

가 .

C(Sodium formaldehyde

sulfoxylate) Thiourea dioxide .

2)

가 가 .

가 = +

.

(1) 1g 가
0.4g(= 40°Bé, 가 0.92ml) .
90% 1g 가
가 40°Bé 가 1ml가 .
가 .

40°Bé 가 (ml/l) = (g/l) + 40°Bé
가 (ml/l)

(3)

1)

a) ()

(lab-test) .
.

X% owf 가 , < 19>
5 .

< 19>

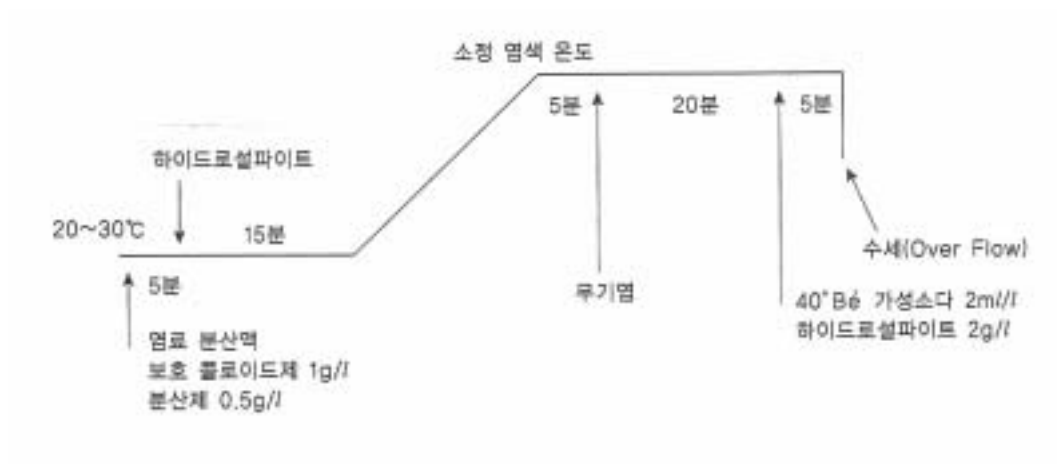
	NNS	NN	NW	NK
40°Bé가	25ml/l	15 ml/l	7.5 ml/l	6.5 ml/l
	5 g/l	5 g/l	5 g/l	5 g/l
	-	-	25g/l	35g/l
	60	60	50	50
	60	60	50	20

45 . NW NK
15 가 .

15 .

(3g/l), (2g/l) 90 × 10

b)



50 , 10

3ml/l (35%)

3ml/l (48%)

(2) ()

/

.

→ → → → .

,

,

.

Xg/l

0.5~1g/l ()

60%, 1dip, 1dip.

80~120 ,

< 20> .

< 20>

	NN	NW	(NN/NW)
40°Bé7l ml/l	60~80	30~40	60~80
g/l	30~40	30~40	30~40
g/l	-	50	30

80~100% , 1dip, 1nip.

100~105 , 30 ()

10ml/l

5ml/l

(3g/l), (3g/l) 90~95

, , . , , , .