

- . (1) -

1.

(330~380nm) 가
(400~450nm) 가

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가

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가

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가

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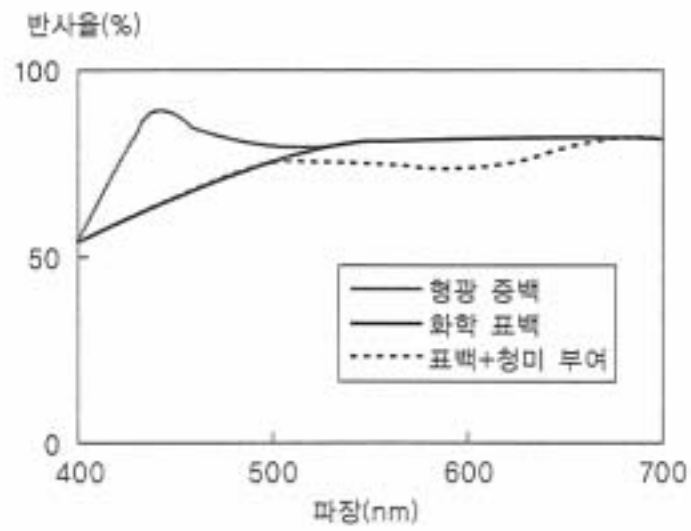
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(, ,)

가 .

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 (400~500nm) 가 .
 가
 가
 가
 가 (400~500nm) 가
 가 .

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1.1 가

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1.2

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가

가 - NO₂, - N = N -

가

가 ,

가

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가 , 가

가 .

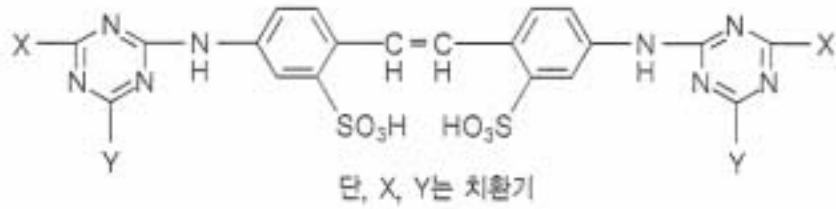
()

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(1)

가

< 2>



< 2>

< 3>

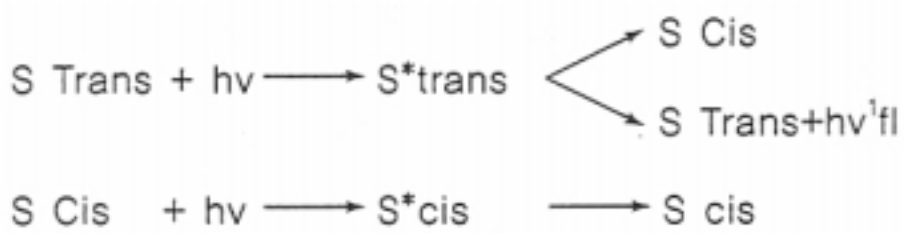
trans-cis

가

가

, trans 가

cis



< 3>

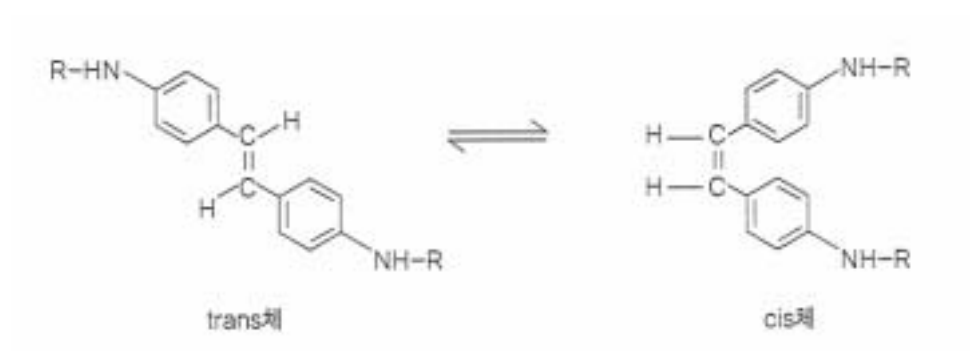
trans

, cis

trans 가

가

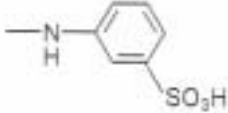
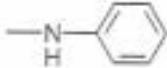
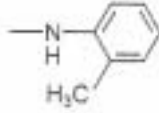
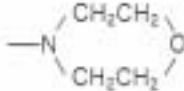
가



< 3>

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 (- SO₃H - OH) ,
 (가) 가
 . (C. I. Fluorescent Brightener 24
).
 가
 .
 가
 (C. I. Fluorescent Brightener 90) .
 가
 가
 가 .
 가
 가
 가
 가
 . (C. I. Fluorescent Brightener 225) < 1> X, Y
 .

< 1>

	X	Y
C. I. Fluorescent Brightener 24		- N(C ₂ H ₄ OH) ₂
C. I. Fluorescent Brightener 90		- OCH ₃
C. I. Fluorescent Brightener 225		

(2)

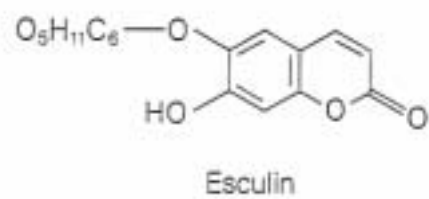
가

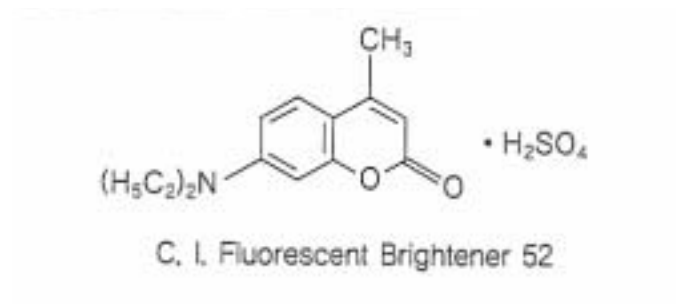
9Esculin)

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C. I. Fluorescent Brightener 52

가





가

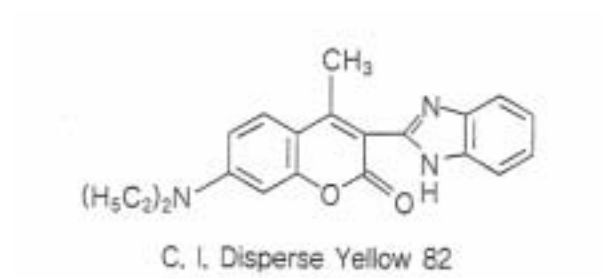
Flavine

가

,

C.

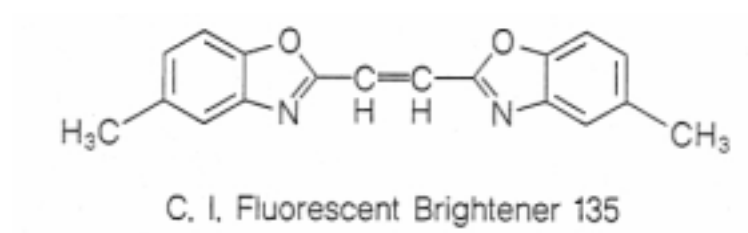
I. Disperse Yellow 82가 .



(3)

가

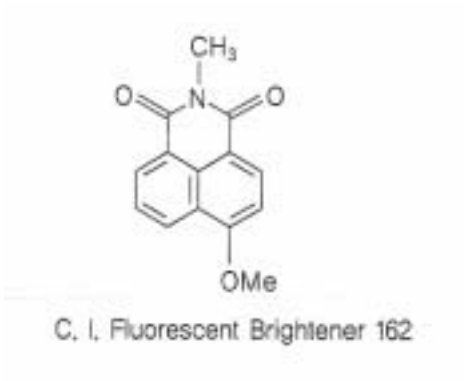
C. I. Fluorescent Brightener 135



(4)

. C. I. Fluorescent Brightener

162



1.3

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佳化	Whitex	
日本化薬	Kayaphor	Mikawhite
昭和化工	Illuminarl	
昭和化学	Hakkol	
日本曹達	Kaycoll	

日本化學	Nikkabright	
BASF	Mikephor	Ultraphor
Ciba	Unitex	
Clariant	Leucophor	Hostalux
Bayer	Blankophor	Tasphor

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(1)

1)

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0.2% owf Whitex BF conc

10% owf

40 30 .

가 40~60

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가 .

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2)

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1~4g/l Whitex BRF

60~70% , 95~105 1~2 .

가

가 .

(2)

0.2% owf Whitex BF conc.

0.5~1ml (80%) pH 4~5

65~95 30 .

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가 .

(3)

(Whitex WS)

가 .

0.2~1.0% owf Whitex WS

50~60 30 .

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(4)

가 ,

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1)

·
0.2~1.5owf Whitex ERN conc.
100~120 30~60 .

Whitex ERN , ,
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가 .

2)

/ 가
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30~50g/l Whitex ERN conc.
60~70% , 100 1~2 ,
150~190 50~60 .

1.5 .

가 “ ”

가 가 .

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, (2003 6) 가

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가

가 ,

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가

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PRTR

PRTR C. I. Fluorescent Brightener 260 2

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PRTR

가

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2

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Oeko Tex

Oeko Tex Standard 100

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