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10-2004-0066008
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(30) JP-P-2003-00008050 2003 01 16 (JP)

(71) 가가 가 가
 4 5-33

(72) 5-12-10-206

1-5-324

(74)

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(54),

/ 가

, , , ,

,

가

가

가

가
58-68008 A

2000-35512 A

가

가

가

가

, , 5 μm 150 μm , 10 μm 1
50 μm .

, 가

(peripheral speed) (roll) 가

4 8

100 2 15 ,
 5 12 .
 , 100 40 , 30
 . 60 1200 , 150
 600 200 400 .

/ 가

60 , 0.5 30 , 100 15 . 0.01 가

(saffron) (soyasapogenol) A, B, C, D, E F, (tomatine), (alfalfasaponin),
 (ginsengoside) 3 4, (medicagenic acid), (hederagenin),
 (glycyrrhizin digitoning), (lucernic acid), (zahnic acid) .

, () , ,

, [Journal of the Science of Food and Agriculture, Vol. 80, p. 2063-2068 (2000)] [Journal of Immunology, Vol. 146, p. 431-437 (1991)], , ,
(reverse phase high performance liquid chromatography), ,

10 μm 200 μm

가 , 가

1

2400 , 99.9 % 75μm 가
 5 . , 28 150 , , , 1 60
 . , 76 300 9.5/12/9.5/100 / / (Kishida Kagaku K.K.
)/ . 3 15 , 50
 . 가

< >

, () (spectrophotometer) ('UV-2200', Shimadzu Corp.)
, 100 14 , L*, a* b* () , L*, a* b* L*, a* b* (1) (3)
, E* (4) . . . ,

$$\mathbb{L}^* = (\mathbb{L}^*) - (\mathbb{L}^*) \quad (1)$$

$$a^* = (a^*) - (a^*) \quad (2)$$

$$b^* = (b^*) - (b^*) \quad (3)$$

$$E^* = \{ (L^*)^2 + (a^*)^2 + (b^*)^2 \}^{1/2} \quad (4)$$

b* , b* , E* , 가
1

2

28 360 , , (Wako
Pure Chemical Industries Ltd.) , ,
, 9.5/13/9.5/100 / / / , ,
1 , 1 , 1

1

28 47 , , 1 , 1
가 1 , , 1

[1]

			1	b	E*
1		9.5		0.37	1.57
2		9.5		0.44	1.74
1	-	-		3.49	8.05
*1: 100					

(57)

1. , / 가

2. , (quillaja)

3.

1

4.

5.

4

6.

1

3

7.

6