

가

가

가

가
58-68008 A

2000-35512 A

가

가

가

가

[illegible]

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

()

0.01 30 % , 0.1 % , 25 % 가

[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 5 , 99.9 % 75 μm 가 , 1 60 , 28 150 0.15/5/100 / / , 76 300 9.5/12/9.5/100 (Kishida Kagaku K.K. 15 , 50)/ 가 3

< >

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

$$L^* = (L^*) - (L^*) \quad (1)$$

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

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

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

b^* , b^* , E^* 가

2

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

1

28 47 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.

4. , , ,

•

5.

4 ,

•

6.

1 3

•

7.

6 ,

1