(19) (KR)
(12) (B1)

(45) 2025 03 18
(11) 10-2783594
(24) 2025 03 12

(51) (Int. Cl.)
A61K 8/9789 (2017.01) ***A23L 33/00*** (2016.01)
A23L 33/105 (2016.01) ***A61K 36/185*** (2006.01)
A61Q 15/00 (2006.01) ***A61Q 19/10*** (2006.01)
(52) CPC
A61K 8/9789 (2017.08)
A23L 33/105 (2016.08)
(21) **10-2024-0129794**
(22) **2024 09 25**
2024 09 25
(56)
KR1020200063440 A*
KR1020220045348 A
*

: 6 :

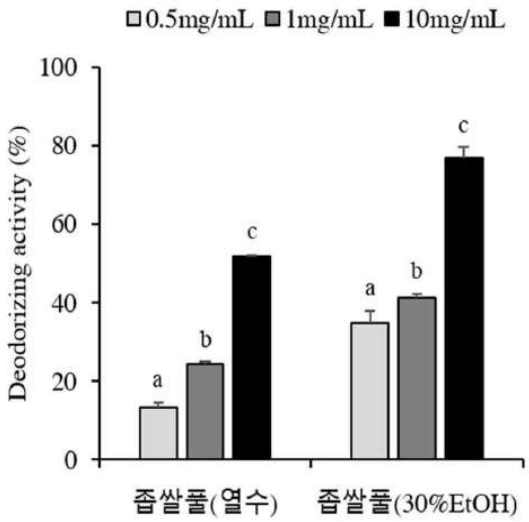
(73)
13, 2 210 (,)
(72)
95, 105 101
141-4, 108 40
3
( )
(74)

(54)

(57)

2- 2-
.

- 1



(52) CPC
A23L 33/40 (2016.08)
A61K 36/185 (2024.05)
A61Q 15/00 (2013.01)
A61Q 19/10 (2013.01)

(72)

76-25 101
1205
91, 1119 1303
448, 106 1205
5 25, 101 1501
20 108
702
136, 102
102
11, 106 201

1

.

2

1 ,

, .

3

.

4

3 ,

, .

5

.

6

5 ,

, .

[0001] (*Lysimachia davurica* *Lysimachia vulgaris var. davurica* R. Kunth)

.

[0003] ,

, , , , ,

.

[0004] ,

. 2- (2-

alkenal), 4- -2- , 4- -2- (Uchida K. (2000) Free Radic. Biol.

Med. 28, 1685-1696; Marnett L. J., Riggins J. N., West J. D. (2003) J. Clin. Invest. 111, 583-593).

[0005] 2- . 2- SH , ε- , (Esterbauer H., Schaur R. J., Zollner H. (1991) Free Radic. Biol. Med. 11, 81-128; Uchida K. (2000) Free Radic. Biol. Med. 28, 1685-1696).

[0006] 2- 2- (2-nonenal) . 2- 3- -2- (3-hexyl-2-propenal), 3- (3-hexylacrolein), (heptylideneacetaldehyde), - (β-hexylacrolein), - (α-nonenyl aldehyde), (nonylenic aldehyde) -2- (trans-2-nonenal) , (palmitoleic acid 9-hexadecenoic acid) . 2- 2- . 40 2- (Esterbauer H., Schaur R. J., Zollner H. (1991) Free Radic. Biol. Med. 11, 81-128; Haze S., Gozu Y., Nakamura S., Kohno Y., Sawano K., Ohta H., Yamazaki K. (2001) J. Invest. Dermatol. 116, 520-524).

[0007] 2- 2- , 2- , .

[0008] 2- 2- .

[0010] .

[0011] .

[0013] , 2- , 2- .

[0014] , 2- .

[0015] , " " , , , , , 1 4 (, ,), , , , , , , , N,N- (DMF), (DMSO), 1,3- , , , , , , , , . . , , . , ( ), (10 50%) .

[0016] " "

.

[0017] , , ( ) , 0.001 % 99.9 % . " "

,

,

.

.

[0018] , , , , ,
, , ( )
,
.

[0019] (,
), ( )
, . (
) , . (
) .

[0020] (,
) , , , - ,
(Oil Soluble Licorice(Glycyrrhiza) Extract) ,
, , , ,
, ,
, , - , .

[0021] ,
, , ,
, ,
. , , ,
, .
, , , , , , , , .

[0022] .

[0023] .
, , , , , , , , , - , ,
, , , .
, , , , , , , ,
, , .

[0024] , ,
, , , , , .

[0025] , , , , ,
, , , , , ,
.

[0026] , , ,
,
, / .

[0027] , ,
, , , , , , ,
, 1,3- , , ,
.

[0028] , ,
,
, , , , .

[0029] -

[0030]

[0031]

[0032]

[0033]

[0034]

[0035] 99.9 % 10.0 % , 0.01 % 20.00 % .

[0036]

[0037]

1 2

[0038] " "

[0039]

, , , , (agar), , , , . , , , , , , .

[0040] , , , . , PBS(phosphate buffered saline) , 5% . , , , , , , , . , , , , (witepsol), (tween) 61, , , , , , .

[0041] , [Remington's Pharmaceutical Sciences(19th ed., 1995)] . .

[0042] , , , , , 1 0.001mg/kg ~ 10g/kg , 0.001mg/kg ~ 1g/kg . 1 1 . .

[0043] , , , , ( ), , , , .

[0044] , .

[0045] , .

[0046] . . . , ( ) , , , , .

[0047] . , , . . ( ) . ( ) , , , , , , , .

[0048] , . , , , , , , .

[0049] , . . . , , , , , , , , , , . ( ), , , . . , , , , .

[0050] , , , , , ,
EDTA( ) , , ,
, , , , , , , , ,
, , .
.

[0051] , , , .

[0052] , ,
.

[0053] , B1, C, E, B12
, , , ,
, , , , , , ,
.

[0054]
.

[0055]
.

[0057] , .

[0058] , , .

[0060] 1 2-
.
2 2-
.

[0061] . .

[0063] < >

[0064] **1.**

[0065] 50g 1L , 3 100 ,
. -40 ~ 40 72
7.6g(15.2%) .

[0066] 50g 30% 1L 3 60 , ,
30% 6.2g(12.4%) .

[0067] **2.**

[0068] **2.1 2-**

[0069] 2-
30% . 0.5, 1 10mg/mL 30%
1mL (pH 7.4) 0.1mM 2- 37
24 . HPLC 2-
.

1

[0070] HPLC

System	Waters HPLC system e2695
Column	YMC Pack pro C18 (4.6mm × 250mm, 5㎛)
Flow rate	1.0mL/min
Detector	PDA (226nm)
Injection vol.	20㎕
Column temp.	30
Mobile phase	A: 0.1% Formic acid in Acetonitrile B: 0.1% Formic acid in water 0 - 30 min, 10 - 100% A; 40 min, 100% A

[0071] 2 1 , 2 1 , 0.5, 1, 10mg/mL
30% 2- , 2-
. 30% 2-
, 10mg/mL , 30% 51.65% 76.77% 2-
.

2

[0072] 2-

	0.5 mg/mL		1 mg/mL		10 mg/mL	
	(%)		(%)		(%)	
	13.13	1.28	24.18	0.62	51.65	0.38
30%	34.88	2.94	41.23	1.00	76.77	2.74

[0073] **2.2 2-**

[0074] 2-
.

[0075] 100mg, 500mg 0.12M (pH 6.0) 1.25mL 20mL
, 1% ,
1mL . 105 1
. 3
2- . 2- ,
2- .

3

[0076]

Headspace	Agilent 7697A	GC	Agilent 8890 GC
Oven temp.	80	Inlet	225 , Split (10:1)
Loop temp.	90	Column	DB-WAX UI (30m×0.25mm, 0.25㎛)
Transfer line temp.	100	Oven temp.	80 (5min) → 5 /min → 200 (5min)
Vial equilibration time	5min	Injection vol.	1㎕
Injection duration	0.5min	Column flow	1mL/min (He)
GC cycle time	41min		
MS	Agilent 7010B Triple Quadrupole GC/MS		
Source temp.	230		
MS1 Quad temp.	150		
MS2 Quad temp.	150		

Scan type	SIM mode (m/z 55, 83, 111)

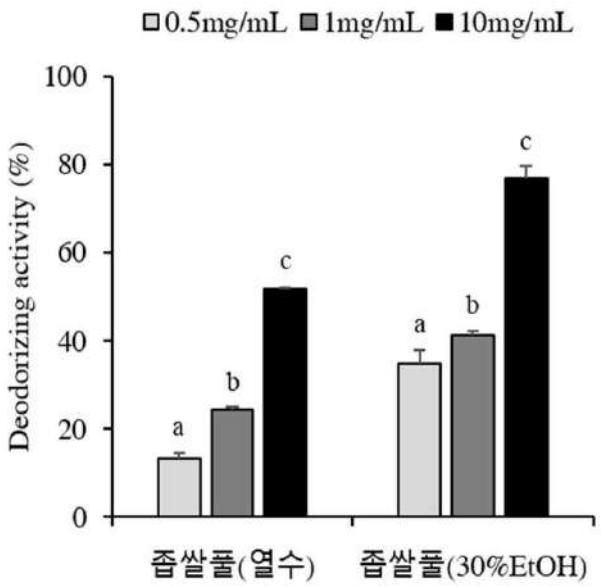
[0077] 4 2 , 4 2 , 2- . 2- 6.48 μg/mL 30% 2- 4.08 μg/mL 2.32 μg/mL . 2- 39.60% 68.87% 30% .

4

[0078] 2-

	2- (μg/mL)	(%)
	6.48	-
	4.08	39.60
30%	2.32	68.87

1



2