USE CONTENT OF DAMAR CAT EYE RESIN

created

LILY LAVIANA

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TABLE OF CONTENTS

TABLE OF CONTENTS ii

CHAPTER I THE CHEMICAL CONTENT OF CATS EYE RESIN 1

CHAPTER I
THE CHEMICAL CONTENT OF CATS EYE RESIN

The functional groups in the resin of cat's eye show that it contains compounds that have alkyl groups, namely:

1. Carbonyl.
2. Vinyl.
3. Hydroxyl.

Analysis using Py-GC/MS showed that in cat's eye resin there were 67 compounds organic. As many as 20 components in the resin the percentage is more than 1% each and most of these are tetracyclic carbon compounds, but there are also several other compounds, 9-credanone; 2 Hcyclopropane (G) benzofuran , 4 , 5,5A,6,6A,6B-hexahydro- 4,4,6B-trimethyl-2(1-methyl); veridiflorol; epi-beta-santalol, and 18-hydroxy-17-methoxy-yohimban-16-carbonitrile.

Table 1 Components in cat's eye resin which is more than 1%

Component	%
Brasikasterol (C28H46O)	20,23
Epoksideasetilgedunin (C26H32O7)	9,56
Veridiflorol (C15H26)	5,34
Pregnana-3,11,20-trion (C21H30O3)	3,75
Andros-5-en-3,17-diol,4,4-dimetil-,diasetat (3β,17β) (C25H38O4)	3,29
Pregna-4,6-dien-3,20-dion,6,17-dimetil (C23H32O2)	3,24
1,4-metano-1H-indena,oktahidro-1,7a-dimetil-4(1-metilen) (C15H24)	2,63
Epi-beta-santalol (C15H24O)	2,62
Stigmasta-5-en-3-ol oleat (C47H82O2)	2,41
Siklobuta(1,2,3,4)-disiklooktana,heksadekahidro-(6aα,6bα, 12aα,12bα) (C16H28)	2,01
18-hidroksi-17-metoksi-yohimban-16-karbonitril (C21H25N3O2)	2,00
5α -14β-androstana (C19H32)	1,98

9-kredanon (C15H24O)	1,84
2H-siklopropan(G)benzofuran,4,5,5A,6,6A,6B-heksahidro-4,4,	1,82
6B-trimetil-2(1-metil) (C15H22O)	1,68
23-metilenkolesterol (C28H46O)	1,53
3,20-pregnanadion, 11-hidroksi-,(5β,11α) (C21H32O3)	1,46
Bisiklogermakrena (C15H24)	1,41
Pregn-4-en-3,20-dion, 16-metil-6-metilen (C23H34O2)	1,41
Pregnana-3,17,20-triol,siklik17,20-(metilboronat),(3α,5β,20S) (C22H37BO3)	1,17
α-camfolena aldehida (C10H16O)	1,17

Table 2 Tetracyclic carbon compounds in cat's eye resin

Component Name	%
Andros-5-en-3,17-diol,4,4-dimetil-,diasetat (3β,17β) (C25H38O4)	3,29
Andros-5-en-16-on,3,17-bis(trifluoroasetiloksi)-3β,17β) (C23H26O5F6)	0,29
Andros-5-en-4-on, 3β-fluoro-17β-hidroksi-asetat (C21H29O3F)	0,59
5α -14β-androstana (C19H32)	1,98
Androstana-3,5-dien-7-on (C19H26O)	0,05
Androstana-17-ol, asetat (C21H34O2)	0,49
5α-androstana-17β-ol, 2β,3β-epoksi-2-metil (C20H32O2)	0,72
Androstana-6-on,3-(asetiloksi)-5-hidroksi-3β, 5α (C21H32O4)	0,21
Asam tiosianat,5α-kolestan-3β-il ester (C28H47NS)	0,35
Brasikasterol (C28H46O)	20,23
Ergos-25-en,3,6-dion, 5,12-dihidroksi- (5α,12β) (C28H44O4)	0,43
Koles-14-en-3-ol, 4-metil (C28H48O)	0,42
Kolestan-3-on,4,4-dimetil-,oksim (5α) (C29H51NO)	0,26
Kolesta-9(11),17(20)24-triena-3,6-diol,(3β,5α,6α) (C27H42O2)	0,31
23-metilenkolesterol (C28H46O)	1,68
24-metilensikloartanol (C31H52O)	0,81

17β -metoksi-5α-androstana-3-metoksim (C21H33NO2)	0,32
Pregna-4,6-dien-3,20-dion,6,17-dimetil (C23H32O2)	3,24
3,20-pregnanadion (C21H32O2)	0,23
3,20-pregnanadion, 11-hidroksi-,(5β,11α) (C21H32O3)	1,53
Pregnana-3,20-dion, 17-[(trimetilsilil)oksi]-bis(O-metiloksim),5β) (C26H46N2O3Si)	0,60
Pregnana-3,17,20-triol,siklik17,20-(metilboronat),(3α,5β,20S) (C22H37BO3)	1,41
Pregnana-3,11,20-trion (C21H30O3)	3,75
5α-pregnana-3,15,20-trion (C21H30O3)	0,14
Pregn-4-en-3,20-dion,16-hidroksi-,(16α) (C21H30O3)	0,58
Pregn-4-en-3,20-dion, 16-metil-6-metilen (C23H34O2)	1,41
Sikloeukalenol (C30H50O)	0,31
Sikloprop[7,8]ergos-22-en-3-on,3',7-dihidro-(5α,7β,8α,22E) (C29H46O)	0,80
Stigmasta-3,5-dien-7-on (C29H46O)	0,73
Stigmasta-5-en-3-ol oleat (C47H82O2)	2,41

Table 3 Compound C15 in cat's eye resin

Component Name	%
Bisiklogermakrena (C15H24)	1,46
1,4-metano-1H-indena,oktahidro-1,7a-dimetil-4(1-metilen) (C15H24)	2,63
1,2,4-metenoazulena, dekahidro-1,5,5,8a-tetrametil-[1S-(1α,2α)] (C15H24)	0,48
(-)- sinuralena (C15H24)	0,19
Epi-beta-santalol (C15H24O)	2,62
9-kredanon (C15H24O)	1,84
1(2H)naftalena,3,4,4a,5,6,8a-heksahidro-4a,8-dimetil-2-(1-metiletil) (C15H24O)	0,18
2H-siklopropan(G)benzofuran,4,5,5A,6,6A,6B-heksahidro-4,4,6B-trimetil-2(1-metil)	1,82
(C15H22O)	0,15

4,6,6-trimetil-2-(3-metil-buta-1,3-dienil)-3-oksa-trisiklo[5,1,0,02]oktana	5,34
(C15H22O)	0,17
Veridiflorol (C15H26)	0,15
d-xilitolpentaasetat (C15H22O10)	5,34

Table 4 Other group compounds in cat's eye resin

Component Name	%
Amilsinamikaldehida (C14H18O)	0,08
α-amorfena (C13H20)	0,25
Asam kaur-16-en-18-oat (C20H30O2)	0,06
Asam 9,12-oktadekadienoat (Z,Z)-2,3-bis[(trimetilsilil)oksi]propil ester (C27H54O4Si2)	0,39
Asam tetradekanoat,(3,3a,4,6a,7,8,9,10,10a,10b-dekahidro-3a,10a-dihidroksi-2,10-dimetil-3,8-dioksobenzena) (C31H48O6)	0,18
Asam valerat, 4-(2,5-silil)-metil ester (C14H20O2)	0,34
1,2-bis(trimetilsilil)benzene (C12H22Si2)	0,28
1,4-bis(trimetilsilil)benzene (C12H22Si2)	0,07
α-camfolena aldehida (C10H16O)	1,17
Dekametil tetrasiloksana (C10H30O3Si4)	0,47
6,6-dimetil-9-metilena-3-pentil-6A,7,8,9,10,10A-heksahidro-6H-benzo(c)kromena (C21H30O3)	0,16
Epoksideasetilgedunin (C26H32O7) 9,56	9,56
4-fluorofenil-4-(4-propilsikloheksil)sikloheksanoat (C22H31FO2)	0,29
Giberelin A7 metil ester (C20H24O5)	0,21
Gliseril-1,3-benzilidena-2-palmitat (C26H42O4)	0,23
β-ionol (C13H22O)	0,42
Oktadekametil siklononasiloksan (C18H54O9Si9)	0,15
Siklobuta(1,2,3,4)-disiklooktana,heksadekahidro-(6aα,6bα, 12aα,12bα) (C16H28)	2,01
9,19-sikloolanost-24-en-3-ol, asetat (C32H52O2)	0,57

Siklopentanakarboksamida, 3-etenil-2(3-penteniliden)-n-fenil-(1α, 2Z) (C19H23ON)	0,31
5h-siklopropa[3,4]benz-[1,2e]azulen-5-on,9a-(asetiloksi)-3-[(asetiloksi)metil]-1,1a,1b,4,4a,7a,7b ,8,9,9a (C24H32O7)	0,22
Trans-2-(p-metoksifenil)(1-2H1)sikloheksan-1-ol (C13H17O2D)	0,50
Zonarona (C21H38O2)	0,34

Cat's eye resin sap contains about 67 compounds, and can be categorized into four groups, namely:

1. Tetracyclic carbon (30 compounds, 49.57%),
2. Pentacyclic (3 compounds, 2.56%), C15 compounds (11 compounds, 17.09%), and
3. Other groups (23 compounds, 18.26%).

The largest component in cat's eye resin is a compound brasikasterol, which is about 20%. Seeing the potential composition in cat's eye resin, it is necessary to carry out quantitative analysis and further testing of sterol activity, especially as an anticholesterol so that it is possible to use resin as a functional food or medicine.