

-----文献-----

Miyase, T. et al., Chem. Pharm. Bull., 1987, 35, 1109, (Icariside B₁)
Umehara, K. et al., Chem. Pharm. Bull., 1988, 36, 5004, (Citrosides)

§ 3-(3,4-Dihydroxyphenyl)-2-propen-1-ol; (E)-form, 3'-Me ether, 1-O-β-D-glucopyranoside

[化学名・別名] Citrusin D. Isoconiferin

[CAS No.] 65995-51-9

[化合物分類] 単環芳香族 (Simple phenylpropanoids)

[構造式]

[分子式] C₁₆H₂₂O₈

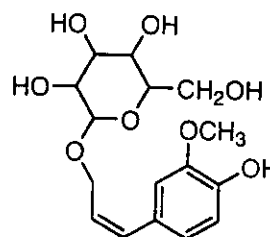
[分子量] 342.345

[基原] 次の植物から分離: *Citrus limon*, *Citrus unshiu*, *Fortunella japonica*, *Pinus sylvestris*

[用途] 抗高血圧作用を示す

[比旋光度]: [α]_D²⁰ -16.9 (c, 4.1 in MeOH)

UV: [neutral] λ_{max} 275 (ε 5000) (MeOH)



-----文献-----

Sawabe, A. et al., Nippon Kagaku Kaishi, 1988, 62, 1067, (Citrusin D)

Greca, M.D. et al., Phytochemistry, 1998, 49, 1299-1304, (Coniferyl alcohol, Citrusin D)

§ 2,9-Dimethyl-2,9-diazatricyclo[10.2.2.2^{5,8}]octadeca-5,7,12,14,15,17-hexaene-3,10-diol (CAS 名)

[化学名・別名] N, α', N', α'-Cyclodi (4-methylaminobenzeneethanol)

[CAS No.] 124190-18-7

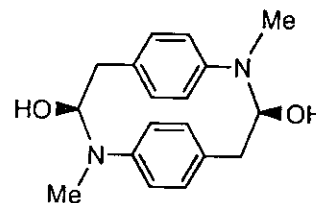
[化合物分類] アルカロイド化合物 (Miscellaneous polycyclic alkaloids)

[構造式]

[分子式] C₁₈H₂₂N₂O₂

[分子量] 298.384

[基原] 次の植物から得られるアルカロイド: 皮をむいた *Citrus unshiu* (ミカン科)



-----文献-----

Matsubara, Y. et al., CA, 1990, 112, 73757; 113, 17474, (分離, H-NMR, C13-NMR, Mass, 構造)

§ 1,8-Epoxy-p-menthan-2-ol; (1S,2S,4R)-form, O-β-D-Glucopyranoside

[CAS No.] 113270-15-8

[化合物分類] テルペノイド (p-Menthane monoterpeneoids)

[構造式]

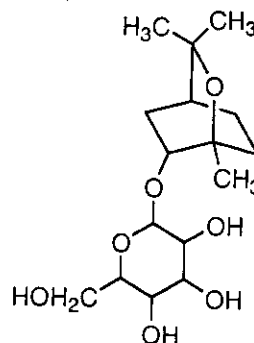
[分子量] 332.393

[基原] *Foeniculum vulgare*, *Citrus unshiu*

[性状] 針状結晶 (MeOH)

[融点] Mp 83-84 °C

[比旋光度]: [α]_D²³ +5.5 (c, 1.6 in MeOH)



-----文献-----

Yoshikawa, Y. et al., Nat. Med. (Tokyo), 1996, 50, 176-178, (*Citrus unshiu* glucoside)

§ Grandmarin; (2'R',3'S')-form, 2'-Me ether

[化学名・別名] *trans*-O-Methylgrandmarin

[化合物分類] ベンゾピラノイド (5,7-Dioxygenated coumarins), ベンゾピラノイド (Dihydropyranocoumarins)

[構造式]

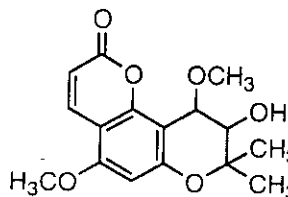
[分子式] C₁₆H₁₈O₆

[分子量] 306.315

[基原] *Citrus unshiu*

[性状] 無定型の塊

[比旋光度]: [α]_D -13.4 (CHCl₃)



-----文献-----

Ito, C. et al., Chem. Pharm. Bull., 1988, 36, 3805; 1989, 37, 2217; 1990, 38, 2586

§ 3,3',4',5,6,7,8-Heptahydroxyflavone; 3,3',4',5,7,8-Hexa-Me ether

[化学名・別名] 6-Hydroxy-3,3',4',5,7,8-hexamethoxyflavone

[CAS No.] 167416-97-9

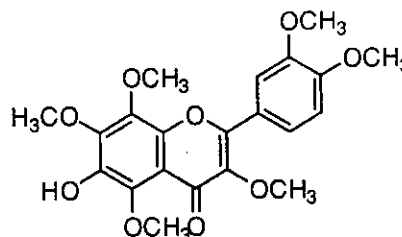
[化合物分類] フラボノイド (Flavonols; 7 × O-置換基)

[構造式]

[分子式] C₂₁H₂₂O₈

[分子量] 418.399

[基原] *Citrus unshiu*



-----文献-----

Chkhikvishvili, I.D. et al., *Khim. Prir. Soedin.*, 1994, 30, 821, (6-Hydroxy-3,3',4',5,7,8-hexamethoxyflavone)

§ 5-Hydroxytryptamine; N^o-Me

[化学名・別名] 5-Hydroxy-N^o-methyltryptamine. 3-(2-Methylaminoethyl)-1H-indol-5-ol (CAS 名)

[CAS No.] 1134-01-6

[その他の CAS No.] 15558-50-6

[化合物分類] アルカロイド化合物 (Simple tryptamine alkaloids)

[構造式]

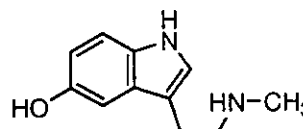
[分子式] C₁₁H₁₄N₂O

[分子量] 190.244

[基原] 次の植物から分離: *Citrus unshiu*. Serotonin metab. in schizophrenic patients treated with MAO inhibitors

[用途] Component of oviposition-stimulating complex for the butterfly *Papilio xuthus*

[融点] Mp 153-156 °C (as oxalate)



-----文献-----

Stoll, A., *Helv. Chim. Acta*, 1955, 38, 1452, (N-Me)

Nishida, R. et al., *Experientia*, 1987, 43, 342, (5-Hydroxy-N^o-methyltryptamine)

§ 3-Methyl-2-buten-1-ol; O-β-D-Glucopyranoside

[化学名・別名] Prenyl glucoside

[CAS No.] 117861-55-9

[化合物分類] テルペノイド (Hemiterpenoids)

[構造式]

[分子式] C₁₁H₂₀O₆

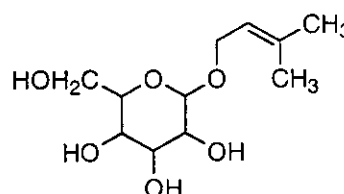
[分子量] 248.275

[基原] 次の植物から分離: *Citrus unshiu*

[性状] 針状結晶 (MeOH)

[融点] Mp 68-70 °C

[比旋光度]: [α]_D²¹ -23.6 (c, 0.2 in MeOH)



-----文献-----

Kitajima, J. et al., *Chem. Pharm. Bull.*, 1998, 46, 1643-1646, (Prenyl glucoside)

§ 6-Methyl-2-vinyl-5-heptene-1,2-diol; 1-O-β-D-Glucopyranoside

[化学名・別名] Unshuoside A

[化合物分類] テルペノイド (Acyclic monoterpene diols)

[構造式]

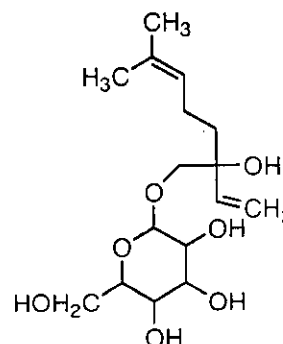
[分子式] C₁₆H₂₈O₇

[分子量] 332.393

[基原] *Citrus unshiu*

[性状] 無定形の粉末

[比旋光度]: [α]_D²⁰ -5 (c, 0.45 in MeOH)



-----文献-----

Ishida, T. et al., *J. Pharm. Sci.*, 1981, 70, 406

Coll, J.C. et al., *Aust. J. Chem.*, 1989, 42, 1983. (分離, H-NMR, C13-NMR)

Yoshikawa, K. et al., *Nat. Med. (Tokyo)*, 1996, 50, 176; *CA*, 125, 81942h, (Unshuoside A)

§ 2-Phenylethanol; O-β-D-Glucopyranoside

[CAS No.] 18997-54-1

[化合物分類] 単環芳香族 (Phenylacetic acid derivatives)

[構造式]

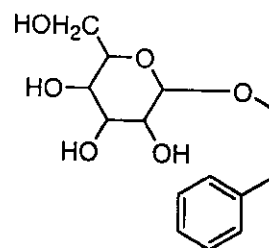
[分子式] $C_{11}H_{10}O_6$

[分子量] 284.308

[基原] 次の植物から分離: *Rosa gallica*, *Citrus unshiu*

[融点] Mp 38-39 °C

[比旋光度]: $[\alpha]_D^{20} -28.8$ (c, 0.4 in MeOH). $[\alpha]_D^{20} -33.5$ (c, 3.0 in H₂O)



----- 文献 -----

Chopra, M.M. et al., *Perfum. Essent. Oil Res.*, 1963, 54, 238; *CA*, 59, 3714, (分離, 誘導體)

Abramovitch, R.A. et al., *Can. J. Chem.*, 1966, 44, 2913, (分離)

Karrer, W. et al., *Konstitution und Vorkommen der Organischen Pflanzenstoffe*, 2nd edn., Birkhäuser Verlag, Basel, 1972, no. 251, (生育)

Kozawa, M. et al., *Chem. Pharm. Bull.*, 1983, 31, 2712-2717, (Phenethyl ferulate)

Son, S. et al., *Chem. Pharm. Bull.*, 2001, 49, 236-238, (Phenethyl caffeate, synth, cryst struct, bibl)

§ 2-Phenylethanol; O- $[\beta$ -D-Rhamnopyranosyl-(1 → 6)- β -D-glucopyranoside]

[化学名・別名] Phenethyl rutinoside

[CAS No.] 88510-08-1

[化合物分類] 単環芳香族 (Phenylacetic acid derivatives)

[構造式]

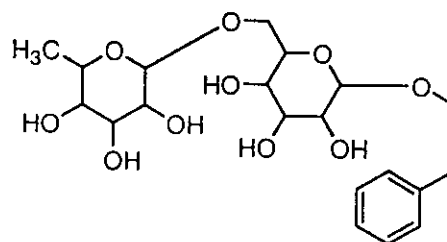
[分子式] $C_{20}H_{30}O_{11}$

[分子量] 430.451

[基原] 次の植物から分離: *Citrus unshiu*

[性状] 無定形の粉末・一水和物

[比旋光度]: $[\alpha]_D^{20} -101.2$ (c, 0.1 in MeOH)



----- 文献 -----

Karrer, W. et al., *Konstitution und Vorkommen der Organischen Pflanzenstoffe*, 2nd edn., Birkhäuser Verlag, Basel, 1972, no. 251, (生育)

Kozawa, M. et al., *Chem. Pharm. Bull.*, 1983, 31, 2712-2717, (Phenethyl ferulate)

Son, S. et al., *Chem. Pharm. Bull.*, 2001, 49, 236-238, (Phenethyl caffeate, synth, cryst struct, bibl)

§ § ミカン科ナツミカン (*Citrus natsudaidai* Hayata) の果実。

§ Citropone A

[CAS No.] 98496-33-4

[化合物分類] アルカロイド化合物 (Acridone alkaloids)

[構造式]

[分子式] $C_{22}H_{19}NO_6$

[分子量] 393.395

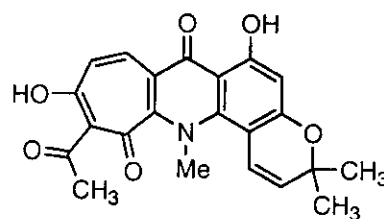
[基原] 次の植物の樹皮から得られるアルカロイド: *Citrus grandis* f. *buntan*, *Citrus natsudaidai* (ミカン科)

[性状] 赤色の針状結晶 (Me:CO)

[融点] Mp 280-282 °C

UV: [base] λ_{max} 212 (ϵ 30900); 270 (ϵ 29500); 282 (sh) (ϵ 28800); 307 (sh) (ϵ 30200); 324 (ϵ 30900) (MeOH/NaOMe) (Derep) [neutral] λ_{max} 215 (ϵ 18200); 230 (sh) (ϵ 17800); 272 (ϵ 24500); 287 (sh) (ϵ 24000); 330 (sh) (ϵ 12300); 410 (ϵ 6920) (MeOH) (Derep)

[その他のデータ] Citropone A and Citropone B are the first examples of naturally occurring homoacridone alkaloids



----- 文献 -----

Ito, C. et al., *Chem. Pharm. Bull.*, 1990, 38, 1881, (分離, H-NMR, C13-NMR, UV, 結晶構造)

§ Citrusin II

[CAS No.] 139626-29-2

[化合物分類] アミノ酸とペプチド (Cyclic oligo- and polypeptides)

[構造式]

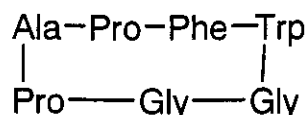
[分子量] 712.804

[基原] 次の植物から分離: *Citrus sinensis*, *Citrus natsudaidai*

[性状] 結晶

[融点] Mp 213-215 °C

[比旋光度]: $[\alpha]_D^{22}$ -75.16 (c, 0.15 in MeOH)



-----文献-----

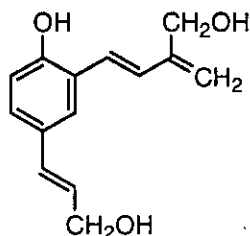
Matsubara, Y. et al., *Agric. Biol. Chem.*, 1991, 55, 2923, (分離, H-NMR, C13-NMR, Mass)

§ Citrusnin A

[CAS No.] 98267-23-3

[化合物分類] 単環芳香族 (Simple phenylpropanoids)

[構造式]



[分子式] $C_{11}H_{16}O_3$

[分子量] 232.279

[基原] 次の植物から分離: leaves of *Citrus natsudaidai* inoculated with a *Pseudomonas species* antagonistic to *Xanthomonas campestris citri*

[用途] Shows high antibacterial activity toward *X. campestris phaseoli* and *X. campestris oryzae*

-----文献-----

Watanabe, K. et al., *Nippon Noyaku Gakkaishi*, 1985, 10, 137; *CA*, 103, 136983a, (分離)

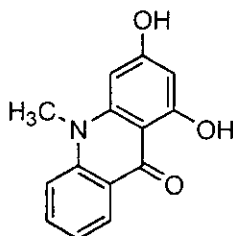
§ 1,3-Dihydroxyacridone; 10-Me

[化学名・別名] 1,3-Dihydroxy-10-methylacridone

[CAS No.] 28333-02-0

[化合物分類] アルカロイド化合物 (Acridone alkaloids)

[構造式]



[分子式] $C_{17}H_{11}NO_3$

[分子量] 241.246

[基原] 次の植物の根から得られるアルカロイド: *Citrus tamurana*, *Citrus natsudaidai* (ミカン科)

[性状] 淡黄色の立方結晶 (CH_2Cl_2)

[融点] Mp 292.5-295 °C で分解 (>295 °C)

-----文献-----

Oh, C.S. et al., *J. Het. Chem.*, 1970, 7, 261-267, (10-Me)

Ju-ichi, M. et al., *Heterocycles*, 1987, 26, 1873, (分離, UV, IR, H-NMR, C13-NMR, Mass, 構造決定, 誘導体)

§ Grandmarin; (2'R,3'R)-form

[化学名・別名] *cis*-form

[CAS No.] 119139-64-9

[化合物分類] ベンゾピラノイド (5,7-Dioxygenated coumarins), ベンゾピラノイド (Dihydropyranocoumarins)

[構造式]

[分子式] $C_{15}H_{16}O_6$

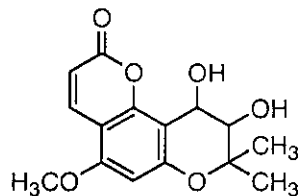
[分子量] 292.288

[基原] *Citrus natsudaidai*

[性状] プリズム結晶 (Et₂O/hexane)

[融点] Mp 229-231 °C

[比旋光度]: $[\alpha]_D +5.41$ (c, 0.074 in $CHCl_3$)



-----文献-----

Ito, C. et al., *Chem. Pharm. Bull.*, 1988, 36, 3805; 1989, 37, 2217; 1990, 38, 2586

§ 3,3',4',5,6,7,8-Heptahydroxyflavone; 3',4',5,6,7,8-Hexa-Me ether

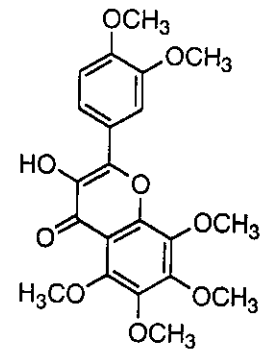
[化学名・別名] 3-Hydroxy-3',4',5,6,7,8-hexamethoxyflavone. 3',4',5,6,7,8-Hexamethoxyflavonol. Natsudaidain

[CAS No.] 35154-55-3

[化合物分類] フラボノイド (Flavonols; 7 × O-置換基)

[構造式]

[分子式] $C_{21}H_{22}O_9$
[分子量] 418.399
[基原] *Citrus natsudaidai* の皮のオイル
[性状] 黄色の結晶 (EtOH)
[融点] Mp 154-156 °C (141-143 °C)



-----文献-----

Ito, C. et al., J. Chin. Chem. Soc. (Taipei), 1998, 45, 89-91, (Natsudaidain)

§ 5-Hydroxy-8,8-dimethyl-2H,8H-benzo[1,2-b:3,4-b']dipyran-2-one (CAS 名)

[化学名・別名] 5-Hydroxyseselin
[化合物分類] ベンゾピラノイド (Pyranocoumarins),
ベンゾピラノイド (5,7-Dioxygenated coumarins)

[構造式]

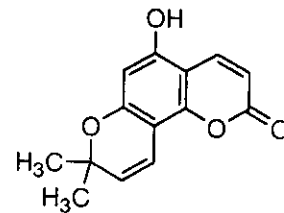
[分子式] $C_{17}H_{16}O_4$

[分子量] 244.246

[基原] *Citrus natsudaidai*

[性状] 針状結晶 (EtOAc)

[融点] Mp 210-213 °C



-----文献-----

Wu, T.S. et al., Phytochemistry, 1983, 22, 1493, (誘導體)

Murray, R.D.H. et al., Tetrahedron, 1984, 40, 3129, (合成法)

Ito, C. et al., Chem. Pharm. Bull., 1988, 36, 3805, (分離)

§ *p*-Mentha-1,8-dien-10-ol; (±)-form, Ac

[CAS No.] 15111-97-4

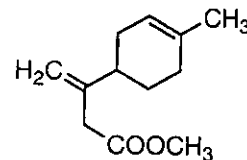
[化合物分類] テルペノイド (*p*-Menthane monoterpeneoids)

[構造式]

[分子式] $C_{12}H_{18}O_2$

[分子量] 194.273

[基原] 次の植物から分離: *Citrus natsudaidai* のオイル



-----文献-----

Moshonas, M.G., J. Agric. Food Chem., 1971, 19, 769, (分離, Ac)

Dubovenko, Zh.V. et al., Khim. Prir. Soedin., 1973, 9, 120; Chem. Nat. Compd. (Engl. Transl.), 1973, 9, 118, (分離, alcohol, aldehyde)

Nomura, M. et al., Nippon Kagaku Kaishi, 1979, 305, (合成法)

§ 1,2,3,5,6-Pentahydroxyacridone; 2,5,10-Tri-Me

[化学名・別名] 1,3,6-Trihydroxy-2,5-dimethoxy-10-methylacridone. Citramine

[CAS No.] 119459-67-5

[化合物分類] アルカロイド化合物 (Acridone alkaloids)

[構造式]

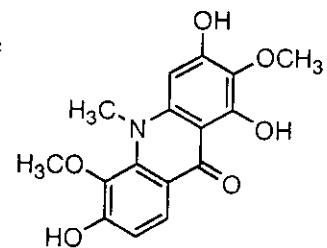
[分子式] $C_{17}H_{15}NO_6$

[分子量] 317.298

[基原] 次の植物から得られるアルカロイド: *Citrus natsudaidai* and roots of Ogonkan (a Citrus hybrid) (ミカン科)

[性状] 淡黄色のプリズム結晶

[融点] Mp 277-279 °C



-----文献-----

Ju-Ichi, M. et al., Heterocycles, 1988, 27, 2197, (Citramine)

§ 1,3,5,6-Tetrahydroxyacridone; 3,5-O,O-Di-Me

[化学名・別名] 1,6-Dihydroxy-3,5-dimethoxyacridone. Natsucitrine I. Des-N-methylcitpressine I

[CAS No.] 96910-77-9

[化合物分類] アルカロイド化合物 (Acridone alkaloids)

[構造式]

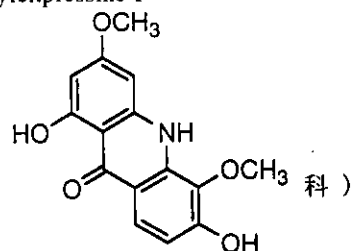
[分子式] $C_{15}H_{13}NO_5$

[分子量] 287.271

[基原] 次の植物の根皮から得られるアルカロイド: *Citrus natsudaidai* (ミカン

[性状] 淡黄色のプリズム結晶 (MeOH)

[融点] Mp 292-293 °C



-----文献-----

Ju-ichi, M. et al., *Heterocycles*, 1985, 23, 1131, (分離, UV, IR, H-NMR, C13-NMR, Mass, 構造決定, 合成法, Natsucitrines)

§ 1,3,5,6-Tetrahydroxyacridone; 3,5,6-O-Tri-Me

[化学名・別名] 1-Hydroxy-3,5,6-trimethoxyacridone. Natsucitrine II. Des-N-methylcitpressine II

[CAS No.] 96910-78-0

[化合物分類] アルカロイド化合物 (Acridone alkaloids)

[構造式]

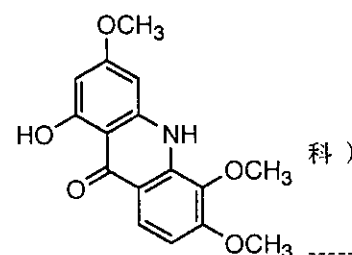
[分子式] $C_{16}H_{15}NO_5$

[分子量] 301.298

[基原] 次の植物の根皮から得られるアルカロイド: *Citrus natsudaidai* (ミカン

[性状] 淡黄色の針状結晶 (C_6H_6/Me_2CO)

[融点] Mp 246-247 °C



-----文献-----

Ju-ichi, M. et al., *Heterocycles*, 1985, 23, 1131, (分離, UV, IR, H-NMR, C13-NMR, Mass, 構造決定, 合成法, Natsucitrines)

§ 1,3,5-Trihydroxyacridone; O¹, N-Di-Me

[化学名・別名] 1,5-Dihydroxy-3-methoxy-10-methylacridone. Citrusamine

[CAS No.] 108598-30-7

[化合物分類] アルカロイド化合物 (Acridone alkaloids)

[構造式]

[分子式] $C_{15}H_{13}NO_4$

[分子量] 271.272

[基原] 次の植物から得られるアルカロイド: *Atalantia ceylanica* の葉, *Citrus tamurana* と *Citrus natsudaidai* の根 (ミカン科)

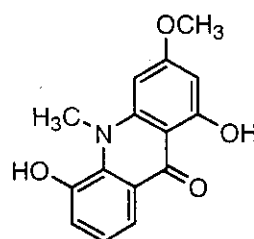
[性状] 橙-黄色の針状結晶 ($CHCl_3/petrol$), 黄色のプリズム結晶 (Me_2CO)

[融点] Mp 140-141 °C. Mp 243-246 °C

[その他のデータ] Large discrepancy in Mp between the two isolates may indicate an incorrect identity

-----文献-----

Takemura, Y. et al., *Chem. Pharm. Bull.*, 1996, 44, 804. (1,3,5-Trihydroxy-10-methylacridone)



***** ミシマサイコ (Misimasaiko) *****

§ § セリ科ミシマサイコ (*Bupleurum falcatum* L.) の根。

§ 5,7-Dihydroxy-2-(hydroxymethyl)-4H-1-benzopyran-4-one; 7-Me ether

[化学名・別名] 5-Hydroxy-2-(hydroxymethyl)-7-methoxychromone. Saikochromone

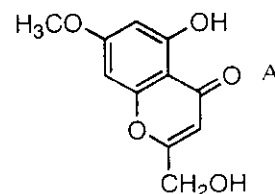
[CAS No.] 132624-99-8

[化合物分類] ベンゾピラノイド (1-Benzopyrans)

[構造式]

[分子式] $C_{11}H_{10}O_5$

[分子量] 222.197



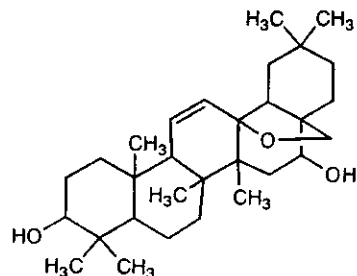
[分子式] $C_{11}H_{16}O_3$
[分子量] 222.197
[基原] *Bupleurum falcatum* の根
[融点] Mp 185-192 °C

----- 文 献 -----

Kobayashi, M. et al., Chem. Pharm. Bull., 1990, 38, 3169, (Saikochromone A)
Baba, K. et al., Phytochemistry, 1992, 31, 1367, (分離, H-NMR, C13-NMR)

§ 13,28-Epoxy-11-oleanene-3,16-diol; (3 β , 13 β , 16 β)-form

[化学名・別名] Saikogenin E
[CAS No.] 13715-23-6
[化合物分類] テルペノイド (Oleanane triterpenoids)
[構造式]
[分子式] $C_{30}H_{48}O_3$
[分子量] 456.707
[基原] 次の植物から得られるサポゲニン: *Bupleurum falcatum* の根
[性状] 結晶
[融点] Mp 289 °C で分解
[比旋光度]: $[\alpha]_D^{20} +112$ (c, 0.5 in $CHCl_3$)

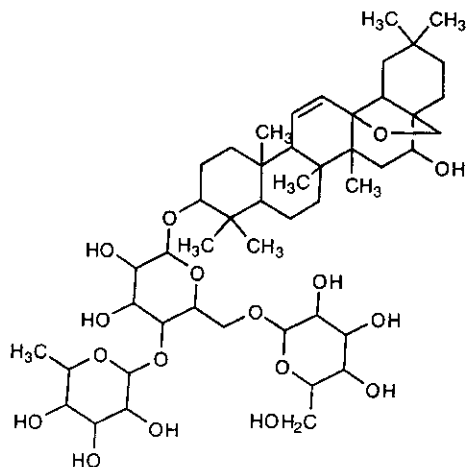


----- 文 献 -----

Aimi, N. et al., Tet. Lett., 1966, 4721, (分離)
Kubota, T. et al., Tet. Lett., 1968, 303, (分離)
Ishii, H. et al., Tet. Lett., 1977, 1227, (分離)
Ebata, N. et al., Phytochemistry, 1996, 41, 895, (*Bupleurum falcatum* saponins)
Pistelli, L. et al., Recent Res. Dev. Phytochem., 1998, 2, 463-483; CA, 131, 127600z, (*Bupleurum* saponins)

§ 13,28-Epoxy-11-oleanene-3,16-diol; (3 β , 13 β , 16 β)-form, 3-O- $[\beta$ -D-Glucopyranosyl-(1 \rightarrow 6)]- $[\alpha$ -L-rhamnopyranosyl-(1 \rightarrow 4)]- β -D-glucopyranoside]

[化学名・別名] Saikosaponin C
[CAS No.] 20736-08-7
[化合物分類] テルペノイド (Oleanane triterpenoids)
[構造式]



[分子式] $C_{48}H_{78}O_{17}$
[分子量] 927.134
[基原] *Bupleurum falcatum*
[性状] 結晶
[融点] Mp 202-210 °C
[比旋光度]: $[\alpha]_D +4.3$ (EtOH)

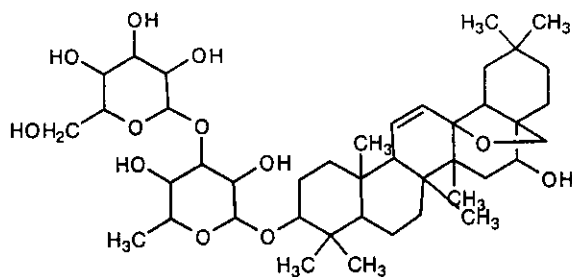
----- 文 献 -----

Aimi, N. et al., Tet. Lett., 1966, 4721, (分離)
Kubota, T. et al., Tet. Lett., 1966, 4725, (構造決定)
Kubota, T. et al., Tet. Lett., 1968, 303, (分離)
Mahato, S.B. et al., J.C.S. Perkin 1, 1987, 629, (誘導体)
Ebata, N. et al., Phytochemistry, 1996, 41, 895, (*Bupleurum falcatum* saponins)
Pistelli, L. et al., Recent Res. Dev. Phytochem., 1998, 2, 463-483; CA, 131, 127600z, (*Bupleurum* saponins)

§ 13,28-Epoxy-11-oleanene-3,16-diol; (3 β , 13 β , 16 β)-form, 3-O- $[\beta$ -D-Glucopyranosyl-(1 \rightarrow 3)]- β -D-fucopyranoside]

[化学名・別名] Saikosaponin E
[CAS No.] 64340-44-9
[化合物分類] テルペノイド (Oleanane triterpenoids)
[構造式]

[分子式] $C_{42}H_{68}O_{12}$
 [分子量] 764.992
 [基原] *Bupleurum falcatum*
 [性状] 結晶
 [融点] Mp 227-230 °C
 [比旋光度]: $[\alpha]_D +40.8$ (MeOH)

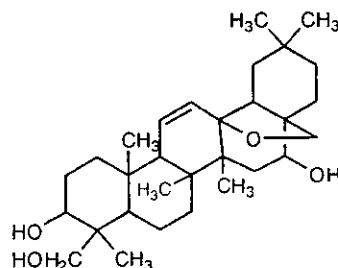


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Aimi, N. et al., Tet. Lett., 1966, 4721, (分離)
 Kubota, T. et al., Tet. Lett., 1966, 4725, (構造決定)
 Kubota, T. et al., Tet. Lett., 1968, 303, (分離)
 Ishii, H. et al., Tet. Lett., 1977, 1227, (分離)
 Mahato, S.B. et al., J.C.S. Perkin 1, 1987, 629, (誘導體)
 Ebata, N. et al., Phytochemistry, 1996, 41, 895, (*Bupleurum falcatum* saponins)
 Pistelli, L. et al., Recent Res. Dev. Phytochem., 1998, 2, 463-483; CA, 131, 127600z, (*Bupleurum* saponins)

§ 13,28-Epoxy-11-oleanene-3,16,23-triol; (3 β,13 β,16 α)-form

[化学名・別名] Saikogenin G
 [CAS No.] 18175-79-6
 [化合物分類] テルペノイド (Oleanane triterpenoids)
 [構造式]
 [分子式] $C_{30}H_{48}O_3$
 [分子量] 472.707
 [基原] 次の植物から得られるサポゲニン: *Bupleurum falcatum* の根
 [性状] 結晶 (MeOH)
 [融点] Mp 238-245 °C
 [比旋光度]: $[\alpha]_D +83$ (c, 0.5 in $CHCl_3/MeOH$)

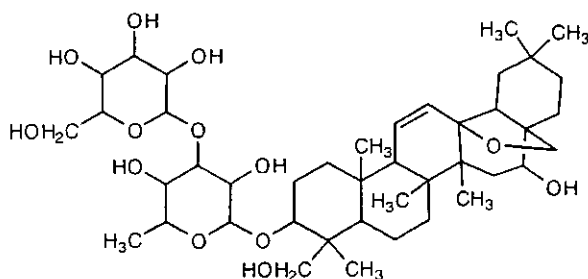


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Seto, H. et al., Agric. Biol. Chem., 1986, 50, 943, (Saikosaponins)
 Ebata, N. et al., Phytochemistry, 1996, 41, 895, (*Bupleurum falcatum* saponins)
 Pistelli, L. et al., Recent Res. Dev. Phytochem., 1998, 2, 463-483; CA, 131, 127600z, (*Bupleurum* saponins)

§ 13,28-Epoxy-11-oleanene-3,16,23-triol; (3 β,13 β,16 α)-form, 3-O- $[\beta$ -D-Glucopyranosyl-(1 → 3)- β -D-fucopyranoside]

[化学名・別名] Saikosaponin D
 [CAS No.] 20874-52-6
 [化合物分類] テルペノイド (Oleanane triterpenoids)
 [構造式]
 [分子式] $C_{42}H_{68}O_{13}$
 [分子量] 780.991
 [基原] *Bupleurum falcatum*
 [性状] 結晶
 [融点] Mp 212-218 °C
 [比旋光度]: $[\alpha]_D +37$ (EtOH)



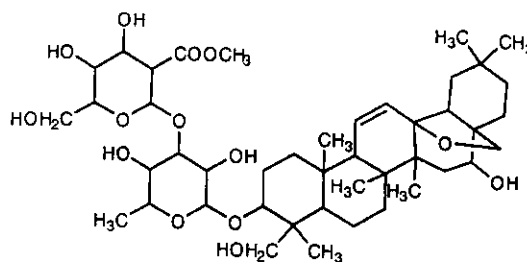
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Seto, H. et al., Agric. Biol. Chem., 1986, 50, 943, (Saikosaponins)
 Ebata, N. et al., Phytochemistry, 1996, 41, 895, (*Bupleurum falcatum* saponins)
 Pistelli, L. et al., Recent Res. Dev. Phytochem., 1998, 2, 463-483; CA, 131, 127600z, (*Bupleurum* saponins)

§ 13,28-Epoxy-11-oleanene-3,16,23-triol; (3 β,13 β,16 α)-form, 3-O- $[2$ -O-Acetyl- β -D-glucopyranosyl-(1 → 3)- β -D-fucopyranoside]

[化学名・別名] Saikosaponin S9
 [化合物分類] テルペノイド (Oleanane triterpenoids)
 [構造式]

[分子式] $C_{44}H_{70}O_{14}$
 [分子量] 823.029
 [基原] *Bupleurum falcatum*
 [性状] 無定型の粉末
 [融点] Mp 213-215 °C
 [比旋光度]: $[\alpha]_D^{23} +489$ (c, 0.54 in EtOH)



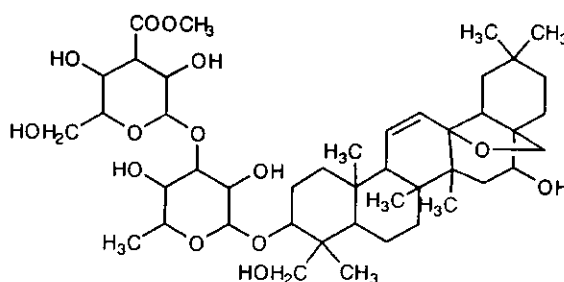
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Seto, H. et al., Agric. Biol. Chem., 1986, 50, 943, (Saikosaponins)
 Ebata, N. et al., Phytochemistry, 1996, 41, 895, (*Bupleurum falcatum* saponins)
 Pistelli, L. et al., Recent Res. Dev. Phytochem., 1998, 2, 463-483; CA, 131, 127600z, (*Bupleurum* saponins)

§ 13,28-Epoxy-11-oleanene-3,16,23-triol; (3 β , 13 β , 16 α)-form, 3-O-[3-O-Acetyl- β -D-glucopyranosyl-(1 \rightarrow 3)- β -D-fucopyranoside]

[化学名・別名] Saikosaponin S5
 [化合物分類] テルペノイド (Oleanane triterpenoids)
 [構造式]

[分子式] $C_{44}H_{70}O_{14}$
 [分子量] 823.029
 [基原] *Bupleurum falcatum*
 [性状] 無定型の粉末



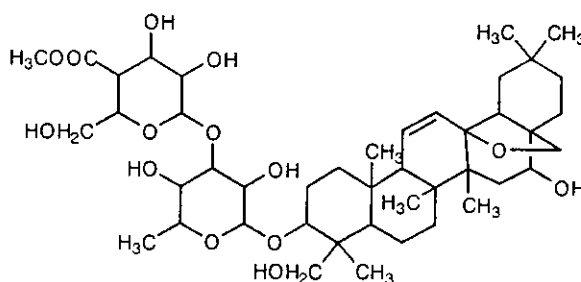
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 Seto, H. et al., Agric. Biol. Chem., 1986, 50, 943, (Saikosaponins)
 Ebata, N. et al., Phytochemistry, 1996, 41, 895, (*Bupleurum falcatum* saponins)
 Pistelli, L. et al., Recent Res. Dev. Phytochem., 1998, 2, 463-483; CA, 131, 127600z, (*Bupleurum* saponins)

§ 13,28-Epoxy-11-oleanene-3,16,23-triol; (3 β , 13 β , 16 α)-form, 3-O-[4-O-Acetyl- β -D-glucopyranosyl-(1 \rightarrow 3)- β -D-fucopyranoside]

[化合物分類] テルペノイド (Oleanane triterpenoids)
 [構造式]

[分子式] $C_{44}H_{70}O_{14}$
 [分子量] 823.029
 [基原] *Bupleurum falcatum*
 [性状] 無定型の粉末
 [比旋光度]: $[\alpha]_D^{27} +42.6$ (c, 1.01 in MeOH)



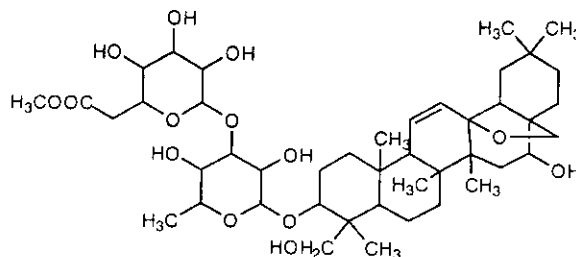
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 Seto, H. et al., Agric. Biol. Chem., 1986, 50, 943, (Saikosaponins)
 Ebata, N. et al., Phytochemistry, 1996, 41, 895, (*Bupleurum falcatum* saponins)
 Pistelli, L. et al., Recent Res. Dev. Phytochem., 1998, 2, 463-483; CA, 131, 127600z, (*Bupleurum* saponins)

§ 13,28-Epoxy-11-oleanene-3,16,23-triol; (3 β , 13 β , 16 α)-form, 3-O-[6-O-Acetyl- β -D-glucopyranosyl-(1 \rightarrow 3)- β -D-fucopyranoside]

[化合物分類] テルペノイド (Oleanane triterpenoids)
 [構造式]

[分子式] $C_{44}H_{70}O_{14}$
 [分子量] 823.029
 [基原] *Bupleurum falcatum*
 [性状] 無定型の粉末



Seto, H. et al., Agric. Biol. Chem., 1986, 50, 943, (Saikosaponins)

Ebata, N. et al., Phytochemistry, 1996, 41, 895, (*Bupleurum falcatum* saponins)

Pistelli, L. et al., Recent Res. Dev. Phytochem., 1998, 2, 463-483; CA, 131, 127600z, (*Bupleurum* saponins)

§ 13,28-Epoxy-11-oleanene-3,16,23-triol; (3 β ,13 β ,16 α)-form, 3-O-[6-O-Malonyl- β -D-glucopyranosyl-(1 \rightarrow 3)- β -D-fucopyranoside]

[化合物分類]テルペノイド (Oleanane penoids)

[構造式]

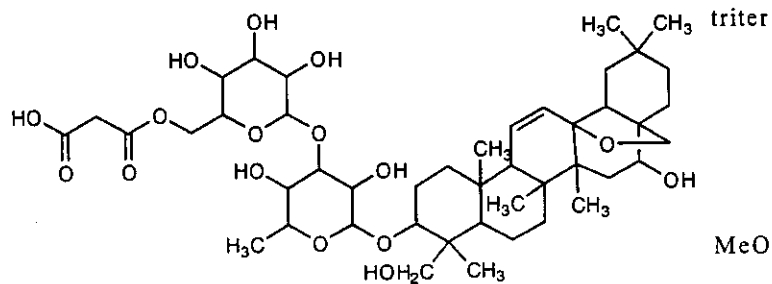
[分子式] $C_{45}H_{70}O_{16}$

[分子量] 867.038

[基原] *Bupleurum falcatum*

[性状] 無定形の粉末

[比旋光度]: $[\alpha]_D^{25} +29.6$ (c, 0.1 in H)



-----文献-----

Seto, H. et al., Agric. Biol. Chem., 1986, 50, 943, (Saikosaponins)

Ebata, N. et al., Phytochemistry, 1996, 41, 895, (*Bupleurum falcatum* saponins)

Pistelli, L. et al., Recent Res. Dev. Phytochem., 1998, 2, 463-483; CA, 131, 127600z, (*Bupleurum* saponins)

§ 13,28-Epoxy-11-oleanene-3,16,23-triol; (3 β ,13 β ,16 β)-form

[化学名・別名] Saikogenin F

[CAS No.] 14356-59-3

[構造式]

[分子式] $C_{30}H_{48}O_4$

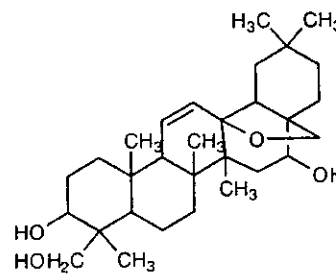
[分子量] 472.707

[化合物分類]テルペノイド (Oleanane triterpenoids)

[基原] 本来のサポゲニン *Bupleurum falcatum* の根から得られる

[性状] 結晶 + 1/2CHCl₃ (CHCl₃)

[比旋光度]: $[\alpha]_D +107.8$



-----文献-----

Seto, H. et al., Agric. Biol. Chem., 1986, 50, 943, (Saikosaponins)

Ebata, N. et al., Phytochemistry, 1996, 41, 895, (*Bupleurum falcatum* saponins)

Pistelli, L. et al., Recent Res. Dev. Phytochem., 1998, 2, 463-483; CA, 131, 127600z, (*Bupleurum* saponins)

§ 13,28-Epoxy-11-oleanene-3,16,23-triol; (3 β ,13 β ,16 β)-form, 3-O-[β -D-Glucopyranosyl-(1 \rightarrow 3)- β -D-fucopyranoside]

[化学名・別名] Saikosaponin A

[CAS No.] 20736-09-8

[化合物分類]テルペノイド (Oleanane triterpenoids)

[構造式]

[分子式] $C_{41}H_{66}O_{13}$

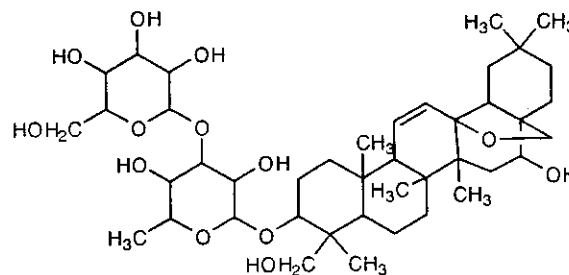
[分子量] 780.991

[基原] *Bupleurum falcatum*

[性状] 結晶

[融点] Mp 225-232 $^{\circ}C$

[比旋光度]: $[\alpha]_D +46$ (EtOH)



-----文献-----

Seto, H. et al., Agric. Biol. Chem., 1986, 50, 943, (Saikosaponins)

Ebata, N. et al., Phytochemistry, 1996, 41, 895, (*Bupleurum falcatum* saponins)

Pistelli, L. et al., Recent Res. Dev. Phytochem., 1998, 2, 463-483; CA, 131, 127600z, (*Bupleurum* saponins)

§ 13,28-Epoxy-11-oleanene-3,16,23-triol; (3 β ,13 β ,16 β)-form, 3-O-[2-O-Acetyl- β -D-glucopyranosyl-(1 \rightarrow 3)- β -D-fucopyranoside]

[化学名・別名] Saikosaponin S10

[化合物分類]テルペノイド (Oleanane triterpenoids)

[構造式]

[分子式] $C_{44}H_{70}O_{14}$

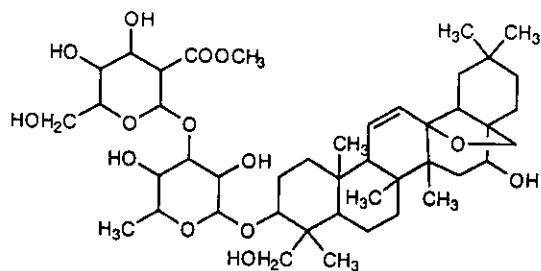
[分子量] 823.029

[基原] *Bupleurum falcatum*

[性状] 無定型の粉末

[融点] Mp 212-216 °C

[比旋光度]: $[\alpha]_D^{22} +45.5$ (c, 0.47 in EtOH)



-----文献-----

Seto, H. et al., Agric. Biol. Chem., 1986, 50, 943, (Saikosaponins)

Ebata, N. et al., Phytochemistry, 1996, 41, 895, (*Bupleurum falcatum* saponins)

Pistelli, L. et al., Recent Res. Dev. Phytochem., 1998, 2, 463-483; CA, 131, 127600z, (*Bupleurum* saponins)

§ 13,28-Epoxy-11-oleanene-3,16,23-triol; (3 β , 13 β , 16 β)-form, 3-O-[3-O-Acetyl- β -D-glucopyranosyl-(1 \rightarrow 3)- β -D-fucopyranoside]

[化学名・別名] Saikosaponin S4

[CAS No.] 102934-41-8

[化合物分類] テルペノイド (Oleanane triterpenoids)

[構造式]

[分子式] $C_{44}H_{70}O_{14}$

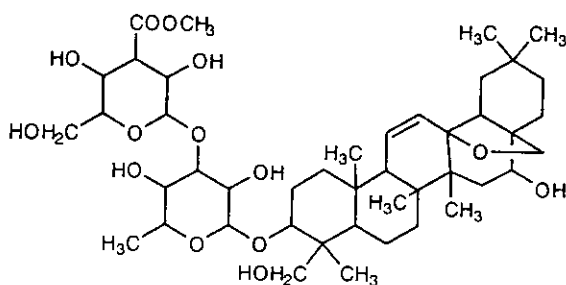
[分子量] 823.029

[基原] *Bupleurum falcatum*

[性状] 無定型の粉末

[融点] Mp 206-209 °C

[比旋光度]: $[\alpha]_D^{22} +49.7$ (c, 0.25 in EtOH)



-----文献-----

Seto, H. et al., Agric. Biol. Chem., 1986, 50, 943, (Saikosaponins)

Ebata, N. et al., Phytochemistry, 1996, 41, 895, (*Bupleurum falcatum* saponins)

Pistelli, L. et al., Recent Res. Dev. Phytochem., 1998, 2, 463-483; CA, 131, 127600z, (*Bupleurum* saponins)

§ 13,28-Epoxy-11-oleanene-3,16,23-triol; (3 β , 13 β , 16 β)-form, 3-O-[4-O-Acetyl- β -D-glucopyranosyl-(1 \rightarrow 3)- β -D-fucopyranoside]

[化学名・別名] Saikosaponin S8

[化合物分類] テルペノイド

(Oleanane triterpenoids)

[構造式]

[分子式] $C_{44}H_{70}O_{14}$

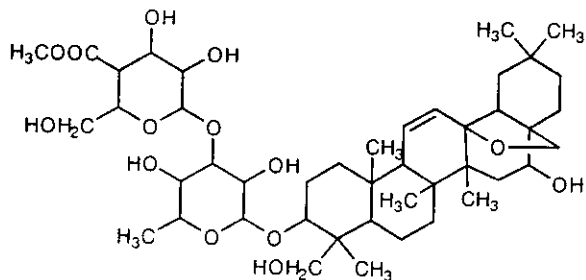
[分子量] 823.029

[基原] *Bupleurum falcatum*

[性状] 無定型の粉末

[融点] Mp 206-208 °C

[比旋光度]: $[\alpha]_D^{22} +47$ (c, 0.61 in EtOH)



-----文献-----

Seto, H. et al., Agric. Biol. Chem., 1986, 50, 943, (Saikosaponins)

Ebata, N. et al., Phytochemistry, 1996, 41, 895, (*Bupleurum falcatum* saponins)

Pistelli, L. et al., Recent Res. Dev. Phytochem., 1998, 2, 463-483; CA, 131, 127600z, (*Bupleurum* saponins)

§ 13,28-Epoxy-11-oleanene-3,16,23-triol; (3 β , 13 β , 16 β)-form, 3-O-[6-O-Acetyl- β -D-glucopyranosyl-(1 \rightarrow 3)- β -D-fucopyranoside]

[化合物分類] テルペノイド (Oleanane triterpenoids)

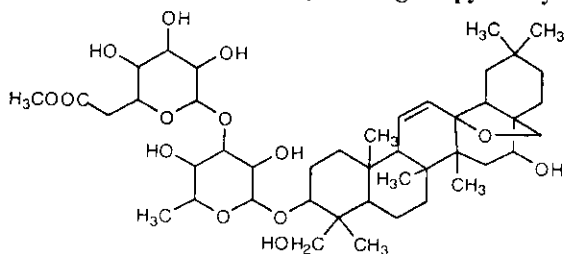
[構造式]

[分子式] $C_{44}H_{70}O_{14}$

[分子量] 823.029

[基原] *Bupleurum falcatum*

[性状] 無定型の粉末



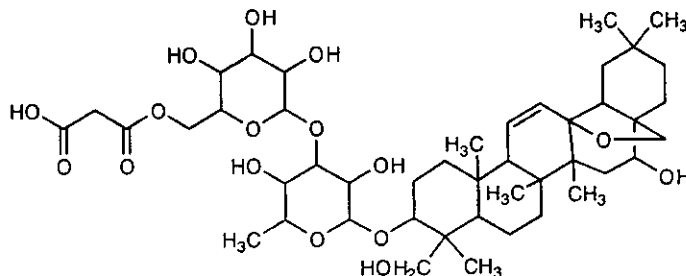
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Seto, H. et al., Agric. Biol. Chem., 1986, 50, 943, (Saikosaponins)
 Ebata, N. et al., Phytochemistry, 1996, 41, 895, (*Bupleurum falcatum* saponins)
 Pistelli, L. et al., Recent Res. Dev. Phytochem., 1998, 2, 463-483; CA, 131, 127600z, (Bupleurum saponins)

§ 13,28-Epoxy-11-oleanene-3,16,23-triol; (3β,13β,16β)-form, 3-O-[6-O-Malonyl-β-D-glucopyranosyl-(1→3)-β-D-fucopyranoside]

[化合物分類]テルペノイド (Oleanane triterpenoids)

[構造式]



[分子式] C₄₅H₇₀O₁₆

[分子量] 867.038

[基原] *Bupleurum falcatum*

[性状] 無定型の粉末

[比旋光度]: [α]_D²⁰ +42 (c, 0.1 in MeOH)

-----文献-----

Seto, H. et al., Agric. Biol. Chem., 1986, 50, 943, (Saikosaponins)
 Ebata, N. et al., Phytochemistry, 1996, 41, 895, (*Bupleurum falcatum* saponins)
 Pistelli, L. et al., Recent Res. Dev. Phytochem., 1998, 2, 463-483; CA, 131, 127600z, (Bupleurum saponins)

§ 10-Hydroxy-2,8-pentadecadiene-4,6-diynal; (2E,8E)-form

[化学名・別名] Saikodiyne B

[CAS No.] 135214-66-3

[化合物分類] 脂肪族化合物 (Miscellaneous acetylenes)

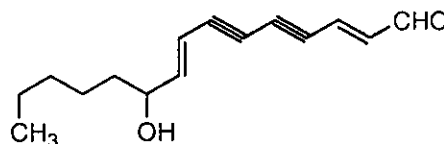
[構造式]

[分子式] C₁₅H₁₈O

[分子量] 230.306

[基原] 次の植物から分離: *Bupleurum falcatum* の根

[比旋光度]: [α]_D²⁰ 0 (c, 0.5 in CHCl₃)



-----文献-----

Morita, M. et al., Phytochemistry, 1991, 30, 1543, (分離, 構造決定, IR, Mass, H-NMR, C13-NMR)

§ 3-(4-Hydroxyphenyl)-2-propen-1-ol; (E)-form, 4'-Me ether, 1-O-[2-(angeloyloxymethyl)-2Z-butenoyl]

[CAS No.] 161928-85-4

[化合物分類] 単環芳香族 (Simple phenylpropanoids)

[構造式]

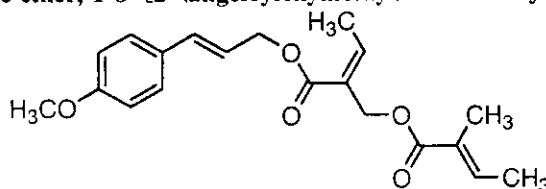
[分子式] C₂₀H₂₀O₅

[分子量] 344.407

[基原] *Bupleurum falcatum* の葉

[性状] 淡黄色のオイル

UV: [neutral] λ_{max} 213 ; 266 (EtOH)



-----文献-----

Karrer, P., Helv. Chim. Acta, 1928, 11, 1209
 Pistelli, L. et al., J. Nat. Prod., 1995, 58, 112, (Me ether angeloyloxymethylbutenoyl)

§ Khellactone; (9R,10R)-form, Diangeloyl

[化学名・別名] Anomalin †

[CAS No.] 4970-26-7

[化合物分類] ベンゾピラノイド (7-Oxygenated coumarins, 8-substituted), ベンゾピラノイド

(Dihydropyrano-coumarins)

[構造式]

[分子式] $C_{24}H_{26}O_7$

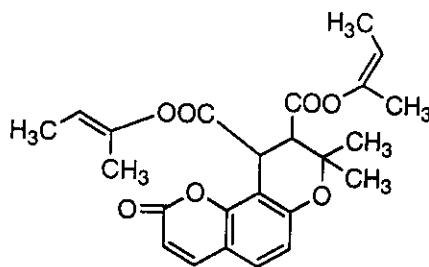
[分子量] 426.465

[基原] 次の植物から分離: *Angelica anomala*, *Bupleurum falcatum*, *Musineon divaricatum*, その他の植物

[融点] Mp 173-174 °C

[比旋光度]: $[\alpha]_D^{27} -78.4$ (-15.5) (EtOH)

UV: [neutral] λ_{max} 322 (EtOH) (Berdy)



----- 文献 -----

Hata, K. et al., Chem. Pharm. Bull., 1966, 14, 94; 442. (Anomalin, Peuformosin)

Murray, R.D.H. et al., Prog. Chem. Org. Nat. Prod., 1978, 35, 200; 1991, 58, 83, (レビュー, 成書)

§ 3-Methyl-2-buten-1-ol; O-[β-D-Apiofuranosyl-(1 → 6)-β-D-glucopyranoside]

[CAS No.] 198832-70-1

[化合物分類] テルペノイド (Hemiterpenoids)

[構造式]

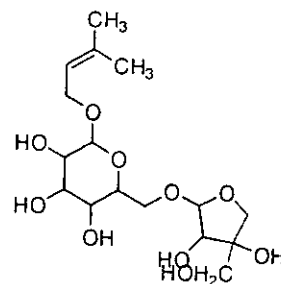
[分子式] $C_{16}H_{28}O_{10}$

[分子量] 380.391

[基原] ワイン (*Vitis vinifera*), *Bupleurum falcatum*

[性状] 粉末

[比旋光度]: $[\alpha]_D^{26} -66.2$ (c, 2 in MeOH)



----- 文献 -----

Naves, Y.-R. et al., Bull. Soc. Chim. Fr., 1971, 886, (分離)

Opdyke, D.L.J., Food Cosmet. Toxicol., 1979, 17, 895, (レビュー, 毒性)

Baltenweck-Guyot, R. et al., J. Nat. Prod., 1997, 60, 1326-1327, (6-apiofuranosylglucoside)

Ono, M. et al., Phytochemistry, 1999, 51, 819-823, (6-apiofuranosylglucoside)

§ 9(11),12-Oleanadiene-3,16,23,28-tetrol; (3β,16β)-form

[化学名・別名] Saikogenin H

[CAS No.] 99365-24-9

[化合物分類] テルペノイド (Oleanane triterpenoids)

[構造式]

[分子式] $C_{30}H_{48}O_4$

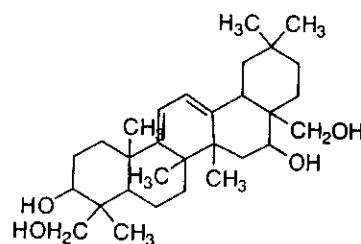
[分子量] 472.707

[基原] 次の植物から得られるサボゲニン: *Bupleurum falcatum*

[性状] 粉末

[融点] Mp 300 °C

[比旋光度]: $[\alpha]_D^{29} +209.8$ (c, 0.5 in MeOH)



----- 文献 -----

Shimizu, K. et al., Chem. Pharm. Bull., 1985, 33, 3349, (合成法, C13-NMR)

§ 11,13(18)-Oleanadiene-3,16,23,28-tetrol; (3β,16α)-form

[化学名・別名] Saikogenin D

[CAS No.] 5573-16-0

[化合物分類] テルペノイド (Oleanane triterpenoids)

[構造式]

[分子式] $C_{30}H_{48}O_4$

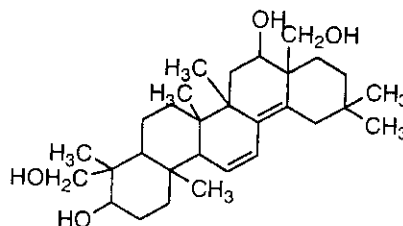
[分子量] 472.707

[基原] *Bupleurum falcatum* の根, *Polycarpone loeflingiac*

[融点] Mp 256-261 °C

[比旋光度]: $[\alpha]_D +236.8$ (c, 0.5 in $CHCl_3$)

[その他のデータ] 非天然物



----- 文献 -----

Kubota, T. et al., Tetrahedron, 1967, 23, 3333, (分離, 構造)

De Pascual Teresa, J. et al., An. Quim., 1978, 74, 311, (分離)

Shimizu, K. et al., Chem. Pharm. Bull., 1985, 33, 3349, (分離, H-NMR, C13-NMR)
Bhandari, S.P.S. et al., J. Indian Chem. Soc., 1987, 64, 258, (分離)

§ 11,13(18)-Oleanadiene-3,16,23,28-tetrol; (3 β,16 β)-form

[化学名・別名] Saikogenin A

[CAS No.] 5092-09-1

[化合物分類] テルペノイド (Oleanane triterpenoids), 薬物: 抗炎症薬
Antiinflammatory agents)

[構造式]

[分子式] C₃₀H₄₈O₄

[分子量] 472.707

[基原] Sapogenin obtained from Saikosides Ia and Ib from *Bupleurum*
tum の根, from *Polycarpone loeflingiae* and *Verbascum thapsus*

[用途] 抗炎症作用を示す

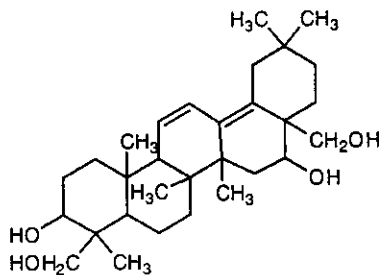
[性状] 結晶 (MeOH)

[融点] Mp 287-290 °C

[比旋光度]: [α]_D -43.3 (c, 0.6 in MeOH)

[Log P 計算値] Log P 4.18 (計算値)

[その他のデータ] 非天然物



falca

-----文献-----

Kubota, T. et al., Tetrahedron, 1967, 23, 3333, (分離, 構造)
De Pascual Teresa, J. et al., An. Quim., 1978, 74, 311, (分離)
Shimizu, K. et al., Chem. Pharm. Bull., 1985, 33, 3349, (分離, H-NMR, C13-NMR)
Bhandari, S.P.S. et al., J. Indian Chem. Soc., 1987, 64, 258, (分離)

§ 9(11),12-Oleanadiene-3,16,28-triol; (3 β,16 β)-form

[化学名・別名] Saikogenin B

[CAS No.] 6002-68-2

[化合物分類] テルペノイド (Oleanane triterpenoids)

[構造式]

[分子式] C₃₀H₄₈O₃

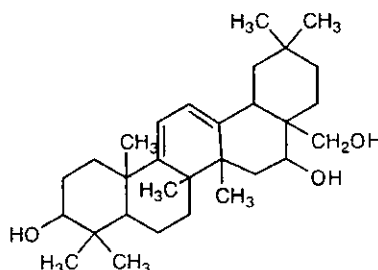
[分子量] 456.707

[基原] *Bupleurum falcatum* の根

[性状] 結晶 (EtOAc)

[融点] Mp 267-269 °C

[比旋光度]: [α]_D +285.5 (c, 1.0 in CHCl₃)



-----文献-----

Kubota, T. et al., Tetrahedron, 1967, 23, 3353
Shimizu, K. et al., Chem. Pharm. Bull., 1985, 33, 3349, (分離)
Mahato, S.B. et al., Phytochemistry, 1988, 27, 2546, (C13-NMR)

§ 11,13(18)-Oleanadiene-3,16,28-triol; (3 β,16 β)-form

[化学名・別名] Saikogenin C

[CAS No.] 5092-10-4

[化合物分類] テルペノイド (Oleanane triterpenoids)

[構造式]

[分子式] C₃₀H₄₈O₃

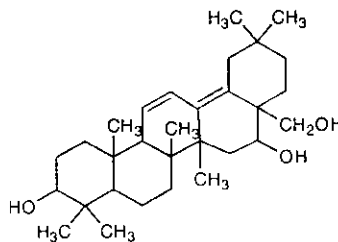
[分子量] 456.707

[基原] *Bupleurum falcatum* の根

[融点] Mp 291-294 °C

[比旋光度]: [α]_D -45.8 (c, 1.06 in CHCl₃)

[その他のデータ] 非天然物



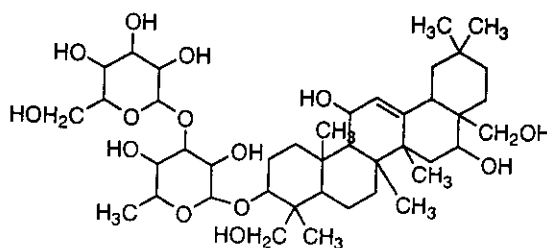
-----文献-----

Kubota, T. et al., Tetrahedron, 1967, 23, 3333, (構造決定)
Kobayashi, Y. et al., Chem. Pharm. Bull., 1981, 29, 2222, (分離)
Yoshikawa, M. et al., Chem. Pharm. Bull., 1982, 30, 3057, (合成法)

Shimizu, K. et al., Chem. Pharm. Bull., 1985, 33, 3349, (分離, C13-NMR)
Mahato, S.B. et al., Phytochemistry, 1988, 27, 1433, (C13-NMR)

§ 12-Oleanene-3,11,16,23,28-pentol; (3 β ,11 α ,16 α)-form, 3-O- $[\beta$ -D-Glucopyranosyl-(1 \rightarrow 3)- β -D-fucopyranoside]

[化学名・別名] Hydroxysaikosaponin D
[化合物分類] テルペノイド (Oleanane triterpenoids)
[構造式]
[分子式] C₄₂H₇₀O₁₄
[分子量] 799.007
[基原] *Bupleurum falcatum*
[性状] 無定型の粉末
[比旋光度]: $[\alpha]_D^{25}$ -0.5 (c, 0.1 in MeOH)

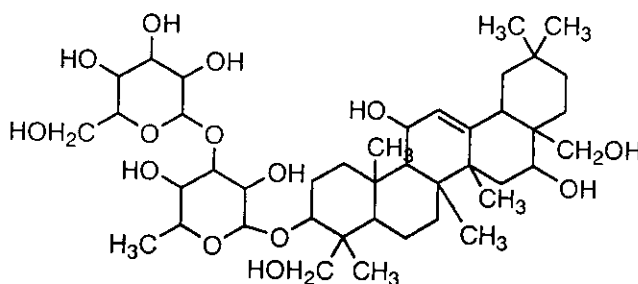


----- 文献 -----

Yamamoto, A. et al., Chem. Pharm. Bull., 1993, 41, 1780, (Budlejasaponins)
Ebata, N. et al., Phytochemistry, 1996, 41, 895, (Hydroxysaikosaponins, 分離, H-NMR, C13-NMR)
Matsuda, H. et al., Bioorg. Med. Chem. Lett., 1997, 7, 2193-2198, (Bupleuroside III and VI)
Pistelli, L. et al., Recent Res. Dev. Phytochem., 1998, 2, 463-483; CA, 131, 127600z, (Bupleurum saponins)

§ 12-Oleanene-3,11,16,23,28-pentol; (3 β ,11 α ,16 β)-form, 3-O- $[\beta$ -D-Glucopyranosyl-(1 \rightarrow 3)- β -D-fucopyranoside]

[化学名・別名] Hydroxysaikosaponin A.
Bupleuroside III
[CAS No.] 173559-73-4
[化合物分類] テルペノイド
(Oleanane triterpenoids)
[構造式]



[分子式] C₄₂H₇₀O₁₄
[分子量] 799.007
[基原] *Bupleurum falcatum*, *Bupleurum scorzonifolium*

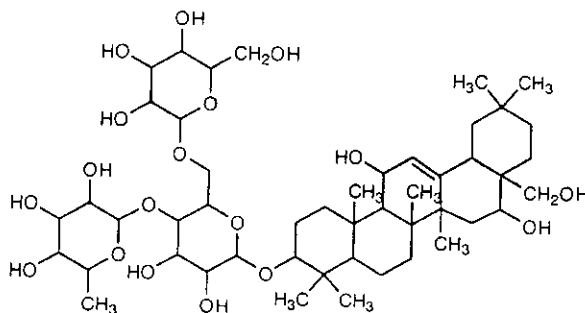
[性状] 結晶
[融点] Mp 235-237 °C
[比旋光度]: $[\alpha]_D^{25}$ +4.4 (c, 0.1 in MeOH). $[\alpha]_D^{25}$ -4.4 (MeOH)

----- 文献 -----

Yamamoto, A. et al., Chem. Pharm. Bull., 1993, 41, 1780, (Budlejasaponins)
Ebata, N. et al., Phytochemistry, 1996, 41, 895, (Hydroxysaikosaponins, 分離, H-NMR, C13-NMR)
Matsuda, H. et al., Bioorg. Med. Chem. Lett., 1997, 7, 2193-2198, (Bupleuroside III and VI)
Pistelli, L. et al., Recent Res. Dev. Phytochem., 1998, 2, 463-483; CA, 131, 127600z, (Bupleurum saponins)

§ 12-Oleanene-3,11,16,28-tetrol; (3 β ,11 α ,16 β)-form, 3-O- $[\beta$ -D-Glucopyranosyl-(1 \rightarrow 6)- $[\alpha$ -L-rhamnopyranosyl-(1 \rightarrow 4)]- β -D-glucopyranoside]

[化学名・別名] Hydroxysaikosaponin C
[CAS No.] 173559-74-5
[化合物分類] テルペノイド
(Oleanane triterpenoids)
[構造式]
[分子式] C₄₈H₈₀O₁₈
[分子量] 945.149
[基原] *Bupleurum falcatum*
[性状] 無定型の粉末
[比旋光度]: $[\alpha]_D^{26}$ -30.8 (c, 0.1 in MeOH)



----- 文献 -----

Ebata, N. et al., Phytochemistry, 1996, 41, 895, (分離, H-NMR, C13-NMR)
Matsuda, H. et al., Bioorg. Med. Chem. Lett., 1997, 7, 2193-2198, (Bupleuroside IX)

Liang, H. et al., Yaoxue Xuebao, 1998, 33, 37-41, (Saikosaponin T)

§ 12-Oleanene-3,16,28-triol; (3 β ,16 β)-form, 3-O-[α -L-Rhamnopyranosyl-(1 \rightarrow 4)]-[β -D-glucopyranosyl-(1 \rightarrow 6)]- β -D-glucopyranoside]

[CAS No.]62687-63-2

[化合物分類]テルペノイド

(Oleanane triterpenoids)

[構造式]

[分子式]C₄₈H₈₀O₁₇

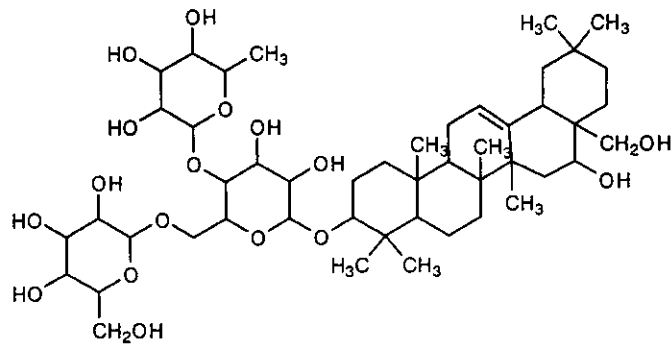
[分子量]929.15

[基原] *Bupleurum falcatum*

[性状]結晶

[融点]Mp 203-206 °C

[比旋光度]:[α]_D²⁴ -16.9



-----文献-----

Morales, G. et al., J. Nat. Prod., 1989, 52, 381, (分離, 誘導體, H-NMR, C13-NMR)

§ 2,8-Pentadecadiene-4,6-diyne-1,10-diol; (2Z,8E)-form

[化学名・別名]Saikodiyne A

[CAS No.]135214-65-2

[化合物分類]脂肪族化合物(Acetylenic alcohols)

[構造式]

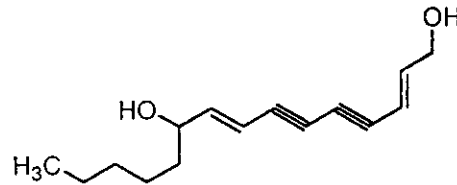
[分子式]C₁₅H₂₀O₂

[分子量]232.322

[基原]次の植物から分離: *Bupleurum falcatum* の根

[性状]黄色がかったオイル

[比旋光度]:[α]_D²⁴ +5.77 (c, 0.88 in CHCl₃)



-----文献-----

Morita, M. et al., Phytochemistry, 1991, 30, 1543, (分離, 構造決定, IR, Mass, H-NMR, C13-NMR)

§ 2,9-Pentadecadiene-4,6-diyne-1-ol; (Z,Z)-form, Ac

[化学名・別名]Saikodiyne C

[CAS No.]135118-57-9

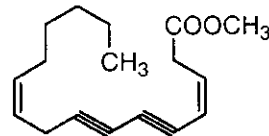
[化合物分類]脂肪族化合物(Acetylenic acids and esters)

[構造式]

[分子式]C₁₇H₂₂O₂

[分子量]258.36

[基原] *Bupleurum falcatum*



-----文献-----

Bohlmann, F. et al., Chem. Ber., 1971, 104, 2030, (分離, Mass, UV, IR)

Schulte, K.E. et al., Arch. Pharm. (Weinheim, Ger.), 1973, 306, 197, (分離)

Choi, B.K. et al., CA, 1975, 87, Morita, M. et al., Phytochemistry, 1991, 30, 1543, (分離, 構造決定, Mass, IR, H-NMR, C13-NMR)

§ 2-Phenylethanol; O-[β -D-Glucopyranosyl-(1 \rightarrow 2)]- β -D-glucopyranoside]

[化学名・別名]Phenethyl sophoroside

[化合物分類]単環芳香族(Phenylacetic acid derivatives)

[構造式]

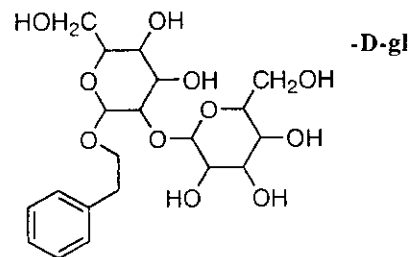
[分子式]C₂₀H₃₀O₁₁

[分子量]446.45

[基原] *Bupleurum falcatum* の果実

[性状]粉末

[比旋光度]:[α]_D²⁰ -17.7 (c, 0.7 in MeOH)



-----文献-----

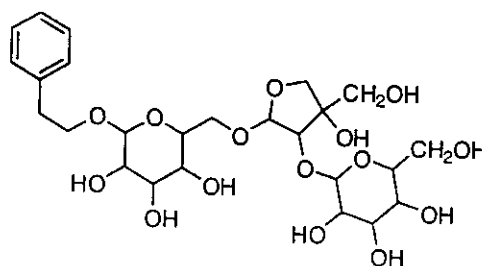
Chopra, M.M. et al., Perfum. Essent. Oil Res., 1963, 54, 238; CA, 59, 3714, (分離, 誘導體)

Abramovitch, R.A. et al., Can. J. Chem., 1966, 44, 2913, (分離)
 Karrer, W. et al., Konstitution und Vorkommen der Organischen Pflanzenstoffe, 2nd edn., Birkhäuser Verlag, Basel, 1972, no. 251, (生育)

§ 2-Phenylethanol; O-[β-D-Glucopyranosyl-(1→2)-β-D-apiofuranosyl-(1→6)-β-D-glucopyranoside]

[化合物分類] 単環芳香族 (Phenylacetic acid derivatives)
 [構造式]

[分子式] C₂₅H₃₈O₁₅
 [分子量] 578.566
 [基原] *Bupleurum falcatum* の果実
 [性状] 粉末
 [比旋光度]: [α]_D²⁰ -56.6 (c, 1.7 in MeOH)

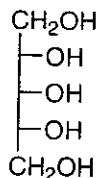


----- 文献 -----

Chopra, M.M. et al., *Perfum. Essent. Oil Res.*, 1963, 54, 238; CA, 59, 3714, (分離, 誘導體)
 Abramovitch, R.A. et al., Can. J. Chem., 1966, 44, 2913, (分離)
 Karrer, W. et al., Konstitution und Vorkommen der Organischen Pflanzenstoffe, 2nd edn., Birkhäuser Verlag, Basel, 1972, no. 251, (生育)

§ Ribitol (CAS 名) (旧 CAS 名)

[化学名・別名] Adonitol
 [CAS No.] 488-81-3
 [化合物分類] 炭水化物 (Pentitols)
 [構造式]
 [分子式] C₅H₁₂O₅
 [分子量] 152.147



[一般的性質] A meso compd. but chiral derivs. (e.g. isopropylidene derivs.) have been prepd. The abs. config. of these is given by the numbering scheme for the D-ribitol skeleton

[基原] Occurs free in the plants *Adonis vernalis* and *Bupleurum falcatum* and in bound form in bacterial cell wall teichoic acids and in Riboflavine

[性状] 結晶 (EtOH)

[融点] Mp 102 °C

[化学物質毒性データ総覧 (RTECS) 登録番号] VJ0800000

[販売元] Aldrich:15337-0; Fluka:2240; Sigma:A9790; Supelco:R42-2490

----- 文献 -----

Kim, H.S. et al., *Acta Cryst. B*, 1969, 25, 2223, (結晶構造)

Brimacombe, J.S. et al., *The Carbohydrates*, 1972, 1A, 479, (レビュー)

RTECS (化学物質毒性データ)

健康障害に関するデータ

急性毒性に関するデータ

<<試験方法>> LD50 試験 (50%致死量試験).

曝露経路 : 腹腔内投与.

被験動物 : げっ歯類-マウス.

投与量・期間 : 10 gm/kg

毒性影響 : 致死量以外に毒性影響に関する報告はない.

参照文献

Proceedings of the Society for Experimental Biology and Medicine. (Academic Press, Inc., 1 E. First St., Duluth, MN 55802) 35,98,1936

§ Stigmast-7-en-3-ol; (3β,5α,24R)-form

[化学名・別名] Schottenol. 22-Dihydrochondrillasterol. 22,23-Dihydro-α-spinasterol
 [CAS No.] 521-03-9

[化合物分類] ステロイド (Stigmastane steroids). (C29)

[構造式]

[分子式] C₂₉H₅₀O

[分子量] 414.713

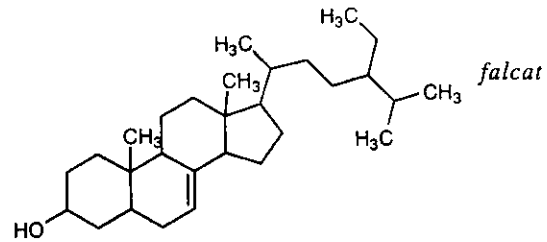
[基原] *Cucumis sativus*. また *Lophocereus schottii*, *Bupleurum*
um, *Bryonia dioica*, その他からも得られる

[性状] 結晶 (MeOH)

[融点] Mp 151-151.5 °C

[比旋光度]: $[\alpha]_D^{20} +9.1$ (c, 0.95 in CHCl₃)

[その他のデータ] Prob. identical with β -Spinasterol



-----文献-----

Terauchi, H. et al., Chem. Pharm. Bull., 1970, 18, 213, (分離, 構造)

Lin, H.-K. et al., Phytochemistry, 1972, 11, 2319, (分離)

Ulubelen, A. et al., Planta Med., 1976, 30, 221, (分離)

Siefert, K. et al., Pharmazie, 1977, 32, 125, (分離)

§ § セリ科 (*Bupleurum chinense* de Candolle) の根。

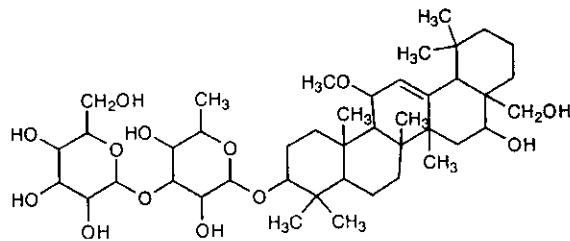
§ 12-Oleanene-3,11,16,28-tetrol; (3 β , 11 α , 16 β)-form, 11-Me ether, 3-O- $[\beta$ -D-glucopyranosyl-(1 \rightarrow 3)- β -D-fucopyranoside]

[化学名・別名] Saikosaponin T. Bupleuroside IX

[CAS No.] 197705-04-7

[化合物分類] テルペノイド (Oleanane triterpenoids)

[構造式]



[分子式] C₅₃H₇₂O₁₃

[分子量] 797.034

[基原] *Bupleurum chinense*, *Bupleurum scorzoniferifolium*

[性状] 結晶

[融点] Mp 237-240 °C (223-225 °C)

[比旋光度]: $[\alpha]_D^{25} +23.8$ (MeOH)

-----文献-----

Ebata, N. et al., Phytochemistry, 1996, 41, 895, (分離, H-NMR, C13-NMR)

Matsuda, H. et al., Bioorg. Med. Chem. Lett., 1997, 7, 2193-2198, (Bupleuroside IX)

Liang, H. et al., Yaoxue Xuebao, 1998, 33, 37-41, (Saikosaponin T)

§ § セリ科 (*Bupleurum scorzoneraefolium* Willdenow) の根。

本調査研究では、成分に関する文献はなかった。

*****ミソ (Miso, Soybean paste) *****

§ § マメ科 (ダイズ), イネ科 (米, 麦) などの種子から醸造した味噌。

*****ミツマタ (Mitsumata) *****

§ § ジンチョウゲ科ミツマタ (*Edgeworthia chrysantha* Lindley) の枝葉, 樹皮または花蕾。

§ 7,7'-Dihydroxy-8,8'-bicycoumarin; O- α -L-Rhamnopyranoside

[化学名・別名] Edgeworoside C

[CAS No.] 126221-40-7

[化合物分類] ベンゾピラノイド (Bis- and tris-coumarins)

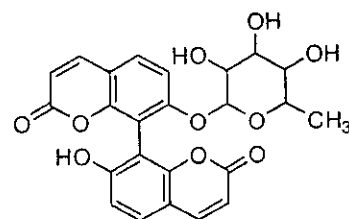
[構造式]

[分子式] C₂₁H₂₀O₁₀

[分子量] 468.416

[基原] *Edgeworthia chrysantha*

[性状] 粉末



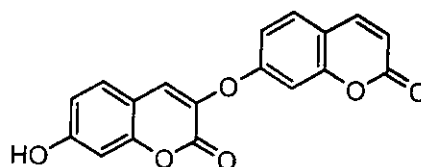
[性状] 粉末
[融点] Mp 194-196 °C

----- 文 献 -----

Joshi, P.C. et al., *Phytochemistry*, 1989, 28, 1281, (Jayantinin)
Baba, K. et al., *Phytochemistry*, 1990, 29, 247, (Edgeworoside C)

§ **Edgeworin**

[化学名・別名] 3-(7-Coumarinyloxy)-7-hydroxycoumarin
[CAS No.] 120028-43-5
[化合物分類] ベンゾピラノイド (Bis- and tris-coumarins)
[構造式]
[分子式] C₁₈H₁₀O₆
[分子量] 322.273



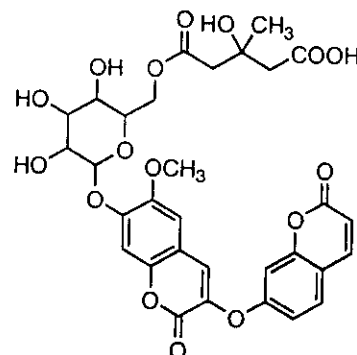
[基原] *Edgeworthia chrysantha*
[性状] 粉末
[融点] Mp 284-296 °C で分解

----- 文 献 -----

Baba, K. et al., *Phytochemistry*, 1989, 28, 221
Deshpande, A.R. et al., *Indian J. Chem., Sect. B*, 1992, 31, 759, (合成法)

§ **Edgeworthin; 6-Me ether, 7-O-[3-hydroxy-3-methylglutaroyl-(→ 6)-β-D-glucopyranoside]**

[化学名・別名] Rutarensin
[CAS No.] 119179-04-3
[化合物分類] ベンゾピラノイド (Bis- and tris-coumarins)
[構造式]



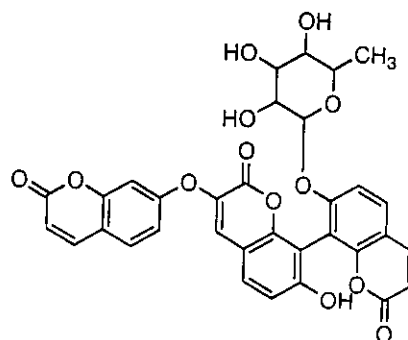
[分子式] C₃₁H₃₀O₁₆
[分子量] 658.568
[基原] *Ruta chalepensis*, *Edgeworthia chrysantha*
[性状] 針状結晶
[融点] Mp 220 °C で分解

----- 文 献 -----

Fisher, H. et al., *Planta Med.*, 1988, 54, 398-400, (Rutarensin)
Baba, K., *Phytochemistry*, 1990, 29, 247-249, (Rutarensin)

§ **Triumbellatin; 7'-O-α-L-Rhamnopyranoside**

[化学名・別名] Edgeworoside A
[CAS No.] 120040-21-3
[化合物分類] ベンゾピラノイド (Bis- and tris-coumarins)
[構造式]



[分子式] C₃₃H₃₂O₁₃
[分子量] 628.545
[基原] *Edgeworthia chrysantha*
[性状] 粉末
[融点] Mp 208-209 °C

----- 文 献 -----

Baba, K. et al., *Phytochemistry*, 1989, 28, 221; 1990, 29, 247, (Edgeworosides)
Kreher, B. et al., *Phytochemistry*, 1990, 29, 3633, (分離, H-NMR, C13-NMR)

§ **Triumbellatin; 7'-O-D-Apiofuranoside**

[化学名・別名] Edgeworoside B
[CAS No.] 126221-39-4
[化合物分類] ベンゾピラノイド (Bis- and tris-coumarins)

[構造式]

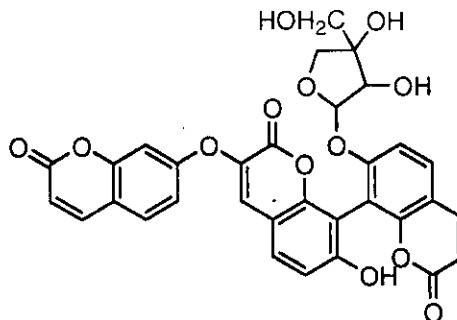
[分子式] C₃₇H₂₂O₁₃

[分子量] 614.518

[基原] *Edgeworthia chrysantha*

[性状] 粉末

[融点] Mp 212.5-213 °C



-----文献-----

Baba, K. et al., *Phytochemistry*, 1989, 28, 221; 1990, 29, 247, (Edgeworosides)

Kreher, B. et al., *Phytochemistry*, 1990, 29, 3633, (分離, H-NMR, C13-NMR)

*****ミツロウ (Bees wax) *****

§ § ミツバチ科ヨーロッパミツバチ (*Apis mellifera* L.) がその巣に集めたミツロウまたはプロポリス。
「ハチミツ」 参照

§ § ミツバチ科トウヨウミツバチ (*Apis indica* Radoszkowski) がその巣に集めたミツロウまたはプロポリス。
「ハチミツ」 参照

*****ミート (Meat) *****

§ § ウシ科ウシ (*Bos taurus* L.) の可食部並びにその加工品。

§ **Trypsin, BAN, JAN**

[化学名・別名] Parenzyme. Parenzymol. Tryptar. Trypure

[CAS No.] 9002-07-7

[化合物分類] アミノ酸とペプチド (Enzymes), 薬物: 酵素 (Enzymes). WC2600. WC5300

[構造式] 不明

[基原] *Bos taurus* (ox) の膵臓腺から得ることが出来る

[用途] 蛋白分解酵素

[性状] 黄色がかった結晶

[その他のデータ] Chymoral の成分

[傷害・毒性] 50% 致死量 (LD₅₀) (ラット, 経口) >5000 mg/kg, 50% 致死量 (LD₅₀) (ラット, 静脈内) 36 mg/kg

[化学物質毒性データ総覧 (RTECS) 登録番号] YN5075000

[販売元] Aldrich:39048-8; Fluka:93611; Sigma:J6022

-----文献-----

Markley, J.L. et al., *Dev. Biochem.*, 1980, 10, 31, (レビュー, 性質)

Martindale, *The Extra Pharmacopoeia*, 30th edn., Pharmaceutical Press, 1993, 1424

***RTECS (化学物質毒性データ) ***

生体影響物質 : 医薬品, 変異原性物質, 天然物.

健康障害に関するデータ

急性毒性に関するデータ

<<試験方法>> 認知されている最低致死量に関する試験

曝露経路 : 静脈内投与.

被験動物 : げっ歯類-モルモット.

投与量・期間 : 30000 units/kg

毒性影響 : {行動} 全身麻痺.

{血液} その他の変化.

{皮膚と付属器官} その他の皮膚炎 (全身ばく露後).

参照文献

Archives Internationales de Pharmacodynamie et de Therapie. (Heymans Institute of Pharmacology, De Pintelaan