

-----文献-----

Izumitani, Y. et al., Chem. Pharm. Bull., 1990, 38, 1299, (分離, IR, H-NMR, C13-NMR, Mas)

§ Capsochrome

[化学名・別名] 5,8-Epoxy-5,8-dihydro-3,3'-dihydroxy- β , κ -caroten-6'-one

[CAS No.] 104012-89-7

[化合物分類] テルペノイド

(Tetraterpenoid)

[構造式]

[分子式] $C_{40}H_{56}O_4$

[分子量] 600.88

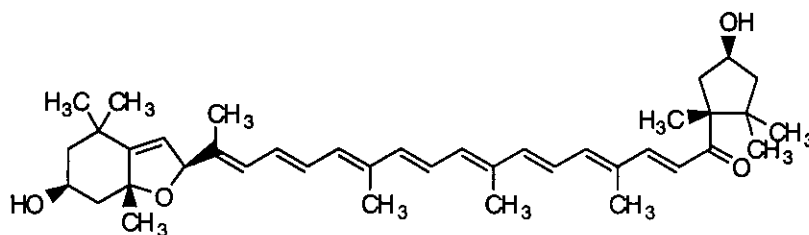
[正確な分子量] 600.41786

[基原] 赤トウガラシ: *Capsicum*

annuum

[性状] 黄色の針状結晶 (C_6H_6 /petrol)

[融点] Mp 180-182 °C (195 °C)



-----文献-----

Karrer, P. et al., Helv. Chim. Acta, 1945, 28, 1143

Parkes, K.F.B. et al., Tet. Lett., 1986, 27, 2535

§ Capsorubin

[化学名・別名] 3,3'-Dihydroxy- κ , κ -carotene-6,6'-dione

[CAS No.] 470-38-2

[化合物分類] テルペノイド

(Tetraterpenoid)

[構造式]

[分子式] $C_{40}H_{56}O_4$

[分子量] 600.88

[正確な分子量] 600.41786

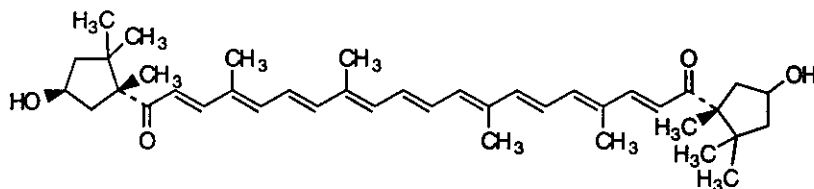
[基原] paprika (*Capsicum annuum*). Main constit. of the carotenoids of *Lilium bulbiferum*, *Lilium*

willmottiae, *Lilium manshuricum*

[性状] 紫-赤色の板状結晶 (petrol)

[融点] Mp 201 °C

[その他のデータ] λ_{max} 468, 503, 541.5 nm (CS_2)



-----文献-----

Barber, M.S. et al., J.C.S., 1961, 4019, (構造決定)

Faigle, J.W. et al., Helv. Chim. Acta, 1964, 47, 741, (構造, H-NMR)

Moss, G.P., Pure Appl. Chem., 1976, 47, 97, (C13-NMR)

Rüttimann, A. et al., Helv. Chim. Acta, 1983, 66, 1939, (合成法)

§ β , χ -Carotene-3',6'-dione; (5'R)-form

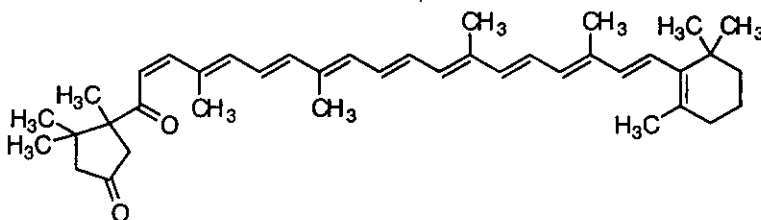
[化学名・別名] Cryptocapsone

[CAS No.] 89195-47-1

[化合物分類] テルペノイド

(Tetraterpenoid)

[構造式]



[基原] *Aesculus* sp.から分離, 例えば, *Aesculus rubicunda* の花粉. Prepd. by Oppenauer oxidn. of red paprika (ex *Capsicum annuum*) capsanthin and cryptocapsin (Capsanthin 参照)

[性状] 微細な紫色結晶 (C_6H_6 /MeOH)

[融点] Mp 182 °C (171 °C)

[その他のデータ] λ_{max} 285, 295, 480 nm (hexane).

-----文献-----

Cholnoky, L. et al., Tet. Lett., 1963, 1257

Neamtu, G. et al., Stud. Cercet. Biochim., 1974, 17, 41, (分離)
Rüttimann, A. et al., Helv. Chim. Acta, 1983, 66, 1939
Straub, O. et al., Key to Carotenoids, 2nd edn., Birkhauser Verlag, Basel and Boston, 1987, 382

§ α -Cryptoxanthin

[化学名・別名] β , ϵ -Caroten-3-ol (CAS 名). Physoxanthin. Zeinoxanthin. α -Kryptoxanthin

[CAS No.] 24480-38-4

[化合物分類] テルペノイド (Tetraterpenoid)

[構造式]

[分子式] $C_{40}H_{56}O$

[分子量] 552.882

[正確な分子量] 552.433115

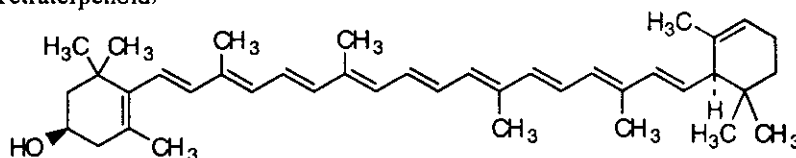
[基原] *Capsicum annuum*, トウモロコシ (*Zea mays*), モモ, プラム, 柑橘類のジュース. また *Acer spp.* から得られる

[用途] 天然食用色素

[性状] 暗赤色の針状結晶 ($C_6H_6/MeOH$)

[融点] Mp 175-176 °C (157.5-158.5 °C)

[比旋光度]: $[\alpha]_D^{25} -508.3$ (c, 0.36 in Me_2CO)



-----文献-----

Bodea, C. et al., Annalen, 1959, 622, 188, (分離)
Petzold, E.N. et al., Arch. Biochem. Biophys., 1960, 86, 163, (分離)
Stewart, I. et al., J. Agric. Food Chem., 1977, 25, 1132, (生育)
Bodea, C. et al., Phytochemistry, 1978, 17, 2037, (構造決定)
Straub, O. et al., Key to Carotenoids, 2nd edn., Birkhauser Verlag, Basel and Boston, 1987, 60, (成書)

§ β -Cryptoxanthin; 5R,6S-Epoxyde

[化学名・別名] 5,6-Epoxy-5,6-dihydro- β , β -caroten-3-ol. Cryptoxanthin epoxide

[CAS No.] 188116-19-0

[その他の CAS No.] 29291-23-4

[化合物分類] テルペノイド (Tetraterpenoid)

[構造式]

[分子式] $C_{40}H_{56}O_2$

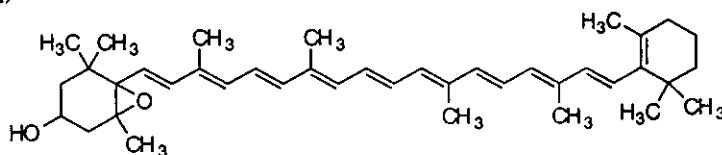
[分子量] 568.881

[正確な分子量] 568.42803

[基原] 次の植物から分離: *Capsicum annuum*, 熟したカキの皮 (*Diospyros kaki*), *Prunus persica* の成熟した果実, マンダリンの雑種 (*Citrus reticulata*) の熟した皮

[性状] 結晶 ($C_6H_6/petrol$)

[融点] Mp 154 °C



-----文献-----

Karrer, P. et al., Helv. Chim. Acta, 1946, 29, 229-233, (epoxide, 合成法)
Subbarayan, C. et al., Anal. Biochem., 1965, 12, 275-281, (epoxide)
Karrer, W. et al., Konstitution und Vorkommen der Organischen Pflanzenstoffe, 2nd edn., Birkhauser Verlag, Basel, 1972, no. 1837, (生育)
Lassertois, D. et al., Phytochemistry, 1978, 17, 411-415, (epoxide, 分離)
Farin, D. et al., Phytochemistry, 1983, 22, 403-408, (5,6-epoxide, 5',6'-epoxide, 分離)
Ebert, G. et al., Phytochemistry, 1985, 24, 29-32, (epoxide, 分離)
Godoy, H.T. et al., Food Chem., 1990, 36, 281-286, (5,6-epoxide)
Molnar, P. et al., Helv. Chim. Acta, 1997, 80, 221-229, (epoxide)

§ Cucurbitaxanthin A

[化学名・別名] 3,6-Epoxy-5,6-dihydro- β , β -carotene-3',5'-diol. Zeaxanthin 3,6-epoxide (incorr.)

[CAS No.] 103955-77-7

[化合物分類] テルペノイド (Tetraterpenoid)

[構造式]

[分子式] $C_{40}H_{56}O_2$

[分子量] 584.881

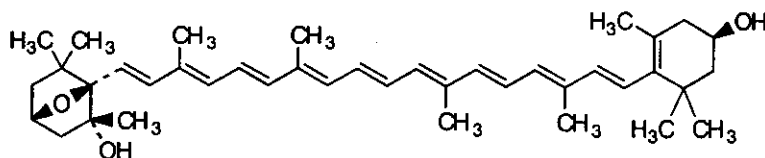
[正確な分子量] 584.422945

[基原] *Cucurbita maxima* and of red pepper *Capsicum annuum*

[性状] 橙色の針状結晶

[融点] Mp 175-176 °C (164-165 °C)

[UV]: [neutral] λ_{max} 434 (); 457 (); 487 () (C_6H_6)



-----文献-----

Matsuno, T. et al., *Phytochemistry*, 1980, 25, 2837, (分離, 誘導體)

Parkes, K.E.B. et al., *Tet. Lett.*, 1986, 27, 2535, (分離)

Deli, J. et al., *Helv. Chim. Acta*, 1993, 76, 952, (合成法, 誘導體)

Deli, J. et al., *Helv. Chim. Acta*, 1996, 79, 1435, (分離, H-NMR, C13-NMR, CD)

§ Cycloviolaxanthin

[化学名・別名] 3,6:3',6'-Diepoxy-5,5',6,6'-tetrahydro- β, β -carotene-5,5'-diol

[CAS No.] 136624-30-1

[化合物分類] テルペノイド (Tetraterpenoid)

[構造式]

[分子式] $C_{40}H_{56}O_4$

[分子量] 600.77

[正確な分子量] 600.41786

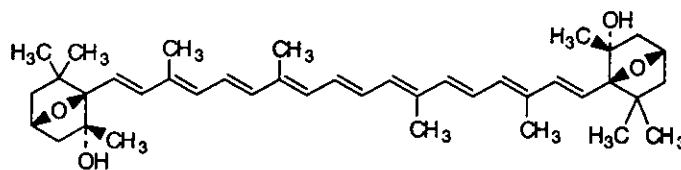
[基原] 次の植物から分離: 赤トウガラシ: *Capsicum annuum* var. *longum nigrum*

[性状] 淡赤色結晶 (C_6H_6 /hexane)

[融点] Mp 193-194 °C

[UV]: [neutral] λ_{max} 427 (); 453 (); 483 () (C_6H_6)

[その他のデータ] λ_{max} 483nm, 453, 427 (C_6H_6 /hexane)



-----文献-----

Deli, J. et al., *Helv. Chim. Acta*, 1991, 74, 819; 1996, 79, 1435, (分離, H-NMR, UV, CD)

§ 3,6:5',8'-Diepoxy-5,5',6,8'-tetrahydro- β, β -carotene-3',5'-diol; (3S,3'S,5R,5'R,6R,8'R)-form

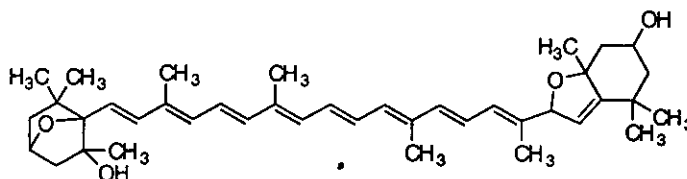
[化学名・別名] Cucurbitachrome I

[CAS No.] 181229-73-2

[化合物分類] テルペノイド (Tetraterpenoid)

[構造式]

[基原] *Capsicum annuum*



-----文献-----

Deli, J. et al., *Helv. Chim. Acta*, 1996, 79, 1435, (分離, H-NMR, C13-NMR, CD)

§ 3,6:5',8'-Diepoxy-5,5',6,8'-tetrahydro- β, β -carotene-3',5'-diol; (3S,3'S,5R,5'R,6R,8')-form

[化学名・別名] Cucurbitachrome 2

[CAS No.] 181229-74-3

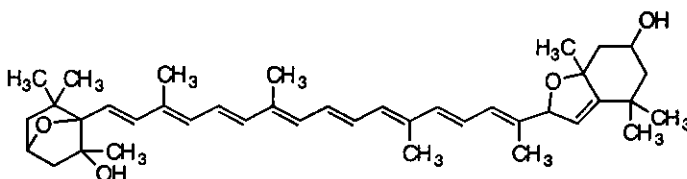
[化合物分類] テルペノイド (Tetraterpenoid)

[構造式]

[基原] *Capsicum annuum*

[性状] 黄色の結晶

[融点] Mp 182-184 °C



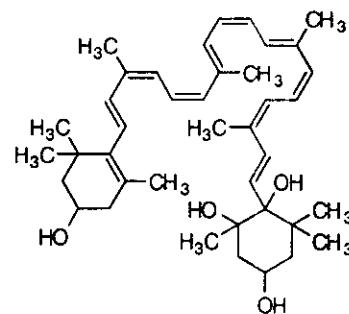
-----文献-----

Deli, J. et al., *Helv. Chim. Acta*, 1996, 79, 1435, (分離, H-NMR, C13-NMR, CD)

§ 5,6-Dihydro- β, β -carotene-3,3',5,6-tetrol; (1R,3S,3'R,6R)-form

[化学名・別名] Karpoxanthin. Carpoanthin

[CAS No.] 99664-48-9
[化合物分類]テルペノイド (Tetraterpenoid)
[構造式]

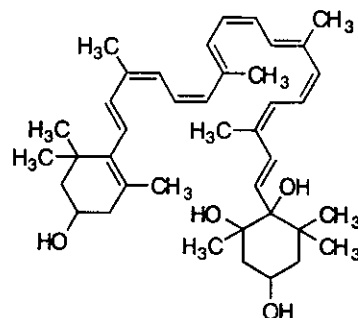


[基原] *Rosa pomifera*, *Capsicum annuum*, *Lilium tigrinum*
[性状] 橙色の結晶 (Et:O/hexane/MeOH)
[融点] Mp 182-183 °C (174 °C)

-----文献-----

Märki-Fischer, E. et al., *Helv. Chim. Acta*, 1985, 68, 1704; 1708
Parkes, K.E.B. et al., *Tet. Lett.*, 1986, 27, 2535

§ 5,6-Dihydro-β,β-carotene-3,3',5,6-tetrol; (1S,3S,3'R,6)-form
[CAS No.] 104012-90-0
[化合物分類]テルペノイド (Tetraterpenoid)
[構造式]



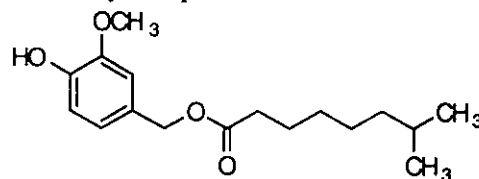
[基原] 次の植物から分離: *Capsicum annuum*
[性状] 黄色の結晶
[融点] Mp 174 °C

-----文献-----

Märki-Fischer, E. et al., *Helv. Chim. Acta*, 1985, 68, 1704; 1708
Parkes, K.E.B. et al., *Tet. Lett.*, 1986, 27, 2535

§ 3,4-Dihydroxybenzyl alcohol; 3-Me ether, 1'-O-(7-methyloctanoyl)
[化学名・別名] 4-Hydroxy-3-methoxybenzyl 7-methyloctanoate. Nordihydrocapsiate
[構造式]

[分子式] C₁₇H₂₆O₄
[分子量] 294.39
[正確な分子量] 294.18311
[基原] *Capsicum annuum*



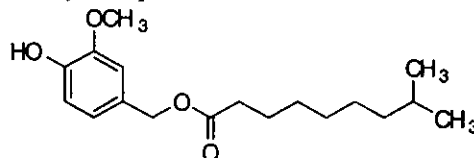
[性状] オイル
[UV]: [neutral] λ_{max} 231 (ε 6800); 281 (ε 2400) (MeOH)

-----文献-----

Kobata, K. et al., *J. Nat. Prod.*, 1999, 62, 335, (Nordihydrocapsiate)

§ 3,4-Dihydroxybenzyl alcohol; 3-Me ether, 1'-O-(8-methylnonanoyl)
[化学名・別名] 4-Hydroxy-3-methoxybenzyl 8-methylnonanoate. Dihydrocapsiate
[構造式]

[分子式] C₁₈H₂₈O₄
[分子量] 308.417
[正確な分子量] 308.19876
[基原] *Capsicum annuum*



[性状] オイル
[UV]: [neutral] λ_{max} 231 (ε 8700); 279 (ε 3700) (MeOH)

-----文献-----

Kobata, K. et al., *J. Agric. Food Chem.*, 1998, 46, 1695, (Capsiate, Dihydrocapsiate)

§ 3,4-Dihydroxybenzyl alcohol; 3-Me ether, 1'-O-(8-methyl-6-nonenoyl) (E-)
[化学名・別名] 4-Hydroxy-3-methoxybenzyl 8-methyl-6-nonenoate. Capsiate

[構造式]

[分子式] $C_{18}H_{26}O_4$

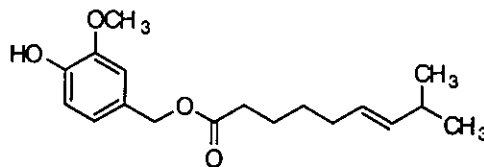
[分子量] 306.401

[正確な分子量] 306.18311

[基原] *Capsicum annuum*

[性状] オイル

[UV]: [neutral] λ_{max} 231 (ϵ 6200); 280 (ϵ 2400) (MeOH)



-----文献-----

Kobata, K. et al., J. Agric. Food Chem., 1998, 46, 1695, (Capsiate, Dihydrocapsiate)

§ 3,4-Dihydroxybenzylamine; 3-Me ether, N-(6-methyl-4E-heptenoyl)

[化学名・別名] *N*-[(4-Hydroxy-3-methoxyphenyl) methyl]-6-methyl-4-heptenamamide. Dinorcapsaicin.

Nornorcapsaicin

[CAS No.] 61229-09-2

[化合物分類] アルカロイド化合物 (Miscellaneous nitrile andisonitrile)

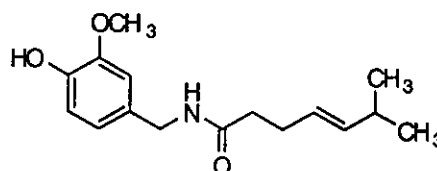
[構造式]

[分子式] $C_{18}H_{25}NO_3$

[分子量] 277.363

[正確な分子量] 277.167794

[基原] *Capsicum annuum*



-----文献-----

Barr, N. et al., Org. Magn. Reson., 1984, 22, 277-279, (C_{13} -NMR)

Hara, M. et al., Chem. Pharm. Bull., 1985, 33, 3107-3112, (H -NMR)

Gannett, P.M. et al., J.O.C., 1988, 53, 1064-1071; 6162, (Capsaicin)

§ 3,4-Dihydroxybenzylamine; 3-Me ether, N-octanoyl

[化学名・別名] *N*-[(4-Hydroxy-3-methoxyphenyl) methyl] octanamide (CAS 名)

[CAS No.] 58493-47-3

[化合物分類] アルカロイド化合物 (Miscellaneous nitrile andisonitrile)

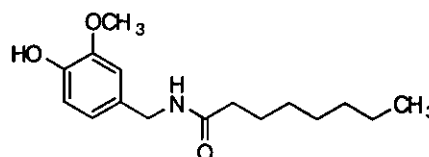
[構造式]

[分子式] $C_{18}H_{25}NO_3$

[分子量] 279.378

[正確な分子量] 279.183444

[基原] *Capsicum annuum*. Component of La Jiao



-----文献-----

Jurenitsch, J. et al., Planta Med., 1979, 36, 61-67, (*N*-Octanoylcapsaicin)

§ 3,4-Dihydroxybenzylamine; 3-Me ether, N-(7-methyloctanoyl)

[化学名・別名] *N*-[(4-Hydroxy-3-methoxyphenyl) methyl]-7-methyloctanamide (CAS 名).

Nordihydrocapsaicin

[CAS No.] 28789-35-7

[化合物分類] アルカロイド化合物 (Miscellaneous nitrile andisonitrile)

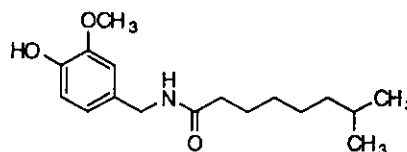
[構造式]

[分子式] $C_{17}H_{27}NO_3$

[分子量] 293.405

[正確な分子量] 293.199094

[基原] *Capsicum annuum*



-----文献-----

Jurenitsch, J. et al., Planta Med., 1979, 36, 61-67, (*N*-Octanoylcapsaicin)

Gannett, P.M. et al., J.O.C., 1988, 53, 1064-1071; 6162, (Capsaicin)

§ 3,4-Dihydroxybenzylamine; 3-Me ether, N-(7-methyl-5E-octenoyl)

[化学名・別名] *N*-[(4-Hydroxy-3-methoxyphenyl) methyl]-7-methyl-5-octenamamide (CAS 名). Norcapsaicin

[CAS No.] 61299-08-1

[その他の CAS No.] 112375-60-7

[化合物分類] アルカロイド化合物 (Miscellaneous nitrile andisonitrile)

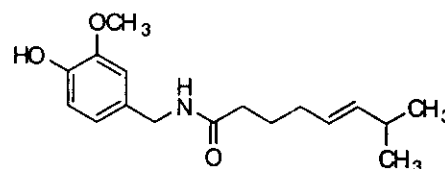
[構造式]

[分子式] $C_{17}H_{25}NO_3$

[分子量] 291.389

[正確な分子量] 291.183444

[基原] *Capsicum annuum*



-----文献-----

Jurenitsch, J. et al., *Planta Med.*, 1979, 36, 61-67, (*N*-Octanoylcapsaicin)

Gannett, P.M. et al., *J.O.C.*, 1988, 53, 1064-1071; 6162, (Capsaicin)

§ 3,4-Dihydroxybenzylamine; 3-Me ether, *N*-(9-methyldecanoyl)

[化学名・別名] *N*-[(4-Hydroxy-3-methoxyphenyl) methyl]-9-methyldecanamide (CAS 名).

Homodihydrocapsaicin

[CAS No.] 20279-06-5

[化合物分類] アルカロイド化合物 (Miscellaneous nitrile andisonitrile)

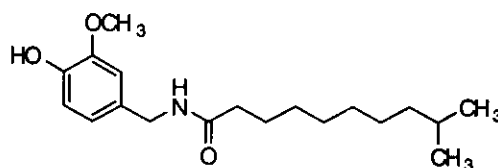
[構造式]

[分子式] $C_{19}H_{31}NO_3$

[分子量] 321.459

[正確な分子量] 321.230394

[基原] *Capsicum annuum*



-----文献-----

Cushman, M. et al., *J.O.C.*, 1980, 45, 5067-5073, (合成法, 誘導體, IR, H-NMR, Mas)

Gannett, P.M. et al., *J.O.C.*, 1988, 53, 1064-1071; 6162, (Capsaicin)

§ 3,4-Dihydroxybenzylamine; 3-Me ether, *N*-(9-methyl-7*E*-decenoyl)

[化学名・別名] *N*-[(4-Hydroxy-3-methoxyphenyl) methyl]-9-methyl-7-decenamide. Homocapsaicin

[CAS No.] 58493-48-4

[その他の CAS No.] 112375-61-8

[化合物分類] アルカロイド化合物 (Miscellaneous nitrile andisonitrile)

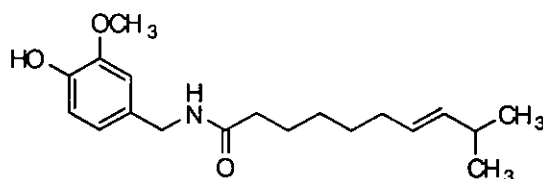
[構造式]

[分子式] $C_{19}H_{33}NO_3$

[分子量] 319.443

[正確な分子量] 319.214744

[基原] *Capsicum annuum*



-----文献-----

Gannett, P.M. et al., *J.O.C.*, 1988, 53, 1064-1071; 6162, (Capsaicin)

§ 3,13-Dihydroxy-1,6,10,14-phytatetraen-16-oic acid; (3*S*,6*E*,10*E*,13 ξ ,14*E*)-form, 3-*O*-[β -*D*-Glucopyranosyl (1 \rightarrow 2)-*D*-glucopyranoside]

[化学名・別名] Capsianoside I. Capsianside I

[CAS No.] 121924-04-7

[化合物分類] テルペノイド (Phytane diterpenoid)

[構造式]

[分子式] $C_{57}H_{92}O_{14}$

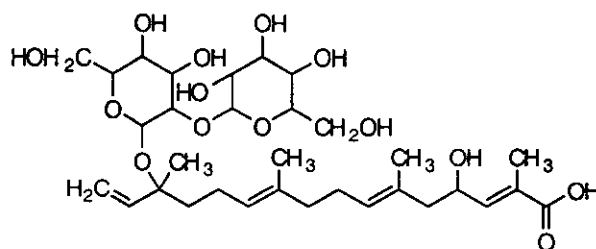
[分子量] 660.754

[正確な分子量] 660.33571

[基原] *Capsicum annuum*

[性状] 粉末

[比旋光度]: $[\alpha]_D^{25}$ -7.6 (c, 0.5 in MeOH)



-----文献-----

Izumitani, Y. et al., *Chem. Pharm. Bull.*, 1990, 38, 1299, (分離, IR, H-NMR, C13-NMR, Mas)

§ 3,6-Epoxy-5,6-dihydro-5-hydroxy- β , κ -caroten-6'-one

[化学名・別名] Capsanthin 3,6-epoxide

[化合物分類] テルペノイド

(Tetraterpenoid)

[構造式]

[分子式] $C_{50}H_{86}O_4$

[分子量] 600.88

[正確な分子量] 600.41786

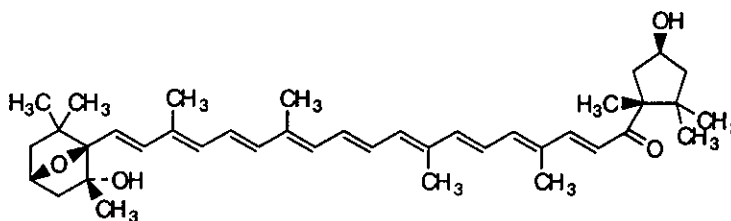
[一般的性質] Incorrectly named

[基原] 赤トウガラシ: *Capsicum annuum*

[性状] 赤色のプリズム結晶

[融点] Mp 169-170 °C

[比旋光度]: $[\alpha]_D^{25} +3.2$ (C_6H_6)



-----文献-----

Parkes, K.E.B. et al., Tet. Lett., 1986, 27, 2535

Deli, J. et al., Helv. Chim. Acta, 1996, 79, 1435, (分離, H-NMR, C13-NMR, CD)

§ 3,6-Epoxy-5,5',6,6'-tetrahydro- β , β -carotene-3',5,5',6'-tetrol

[CAS No.] 181046-82-2

[化合物分類] テルペノイド

(Tetraterpenoid)

[構造式]

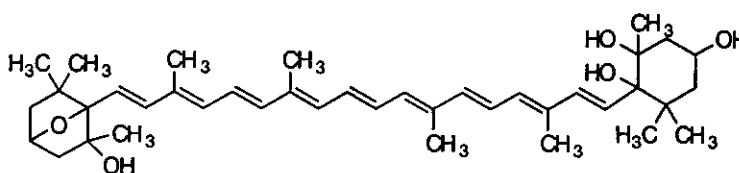
[分子式] $C_{50}H_{88}O_8$

[分子量] 618.895

[正確な分子量] 618.428425

[基原] *Capsicum annuum*

[UV]: [neutral] λ_{max} 427 (); 453 (); 483 () (C_6H_6)



-----文献-----

Deli, J. et al., Helv. Chim. Acta, 1996, 79, 1435, (分離, Mass, UV, CD)

§ 9,11-Eremophiladiene-1,3-diol; (1 β ,3 α ,4 α ,5 β)-form

[化学名・別名] Capsidiol

[CAS No.] 37208-05-2

[化合物分類] テルペノイド (Simple eremophilane sesquiterpenoid)

[構造式]

[基原] Phytoalexin of infected sweet peppers (*Capsicum annuum*)

[用途] 抗カビ剤

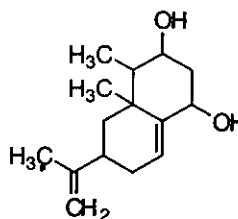
[性状] 結晶 (Et₂O)

[融点] Mp 152-153 °C

[比旋光度]: $[\alpha]_D^{25} +21$ (c, 2.1 in CHCl₃)

[溶解性] メタノール, エタノールに可溶; エーテル, クロロホルムに易溶; 水に難溶

[UV]: [neutral] λ_{max} (MeOH)



-----文献-----

Ward, G.W.B. et al., Phytopathology, 1972, 62, 1186, (Capsenone)

Baker, F.C. et al., Phytochemistry, 1976, 15, 689, (生合成)

Hoyano, Y. et al., Can. J. Chem., 1980, 58, 1894, (生合成)

Stillman, M.J. et al., Can. J. Chem., 1981, 59, 2303, (絶対構造)

Whitehead, I.M. et al., Phytochemistry, 1987, 26, 1367, (Dihydrocapsenone)

Whitehead, I.M. et al., Phytochemistry, 1989, 28, 775, (生合成)

Yoshiazawa, Y. et al., Biosci., Biotechnol., Biochem., 1994, 58, 305, (生合成)

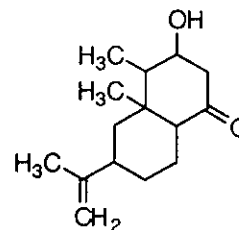
§ 9,11-Eremophiladiene-1,3-diol; (1 β ,3 α ,4 α ,5 β)-form, 1-Ketone, 9,10 β -dihydro

[化学名・別名] 3-Hydroxy-11-eremophilen-1-one. Dihydrocapsenone

[CAS No.] 109986-01-8

[化合物分類]テルペノイド (Simple eremophilane sesquiterpenoid)
[構造式]

[分子式] $C_{15}H_{24}O_2$
[分子量] 236.353
[正確な分子量] 236.17763
[基原] *Capsicum annuum*



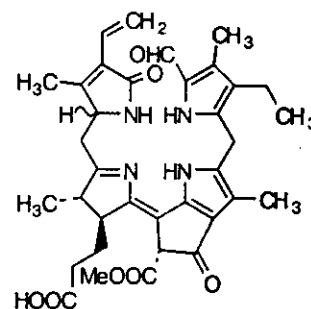
-----文献-----

Ward, G.W.B. et al., *Phytopathology*, 1972, 62, 1186, (Capsenone)
Gordon, M. et al., *Can. J. Chem.*, 1973, 51, 748, (構造決定)
Baker, F.C. et al., *Phytochemistry*, 1976, 15, 689, (生合成)
Hoyano, Y. et al., *Can. J. Chem.*, 1980, 58, 1894, (生合成)
Stillman, M.J. et al., *Can. J. Chem.*, 1981, 59, 2303, (絶対構造)
Whitehead, I.M. et al., *Phytochemistry*, 1987, 26, 1367, (Dihydrocapsenone)
Whitehead, I.M. et al., *Phytochemistry*, 1989, 28, 775, (生合成)
Yoshiazawa, Y. et al., *Biosci., Biotechnol., Biochem.*, 1994, 58, 305, (生合成)

§ *Capsicum annuum* Fluorescent chlorophyll catabolite

[化学名・別名] Ca-FCC-2
[化合物分類] ポリピロール類 (Chlorophyll andderivative)
[構造式]

[分子式] $C_{35}H_{60}N_4O_7$
[分子量] 628.724
[正確な分子量] 628.289701
[基原] Chlorophyll catabolite isol. from *Capsicum annuum*
[UV]: [neutral] λ_{max} 221 (); 318 (); 358 () (H_2O)



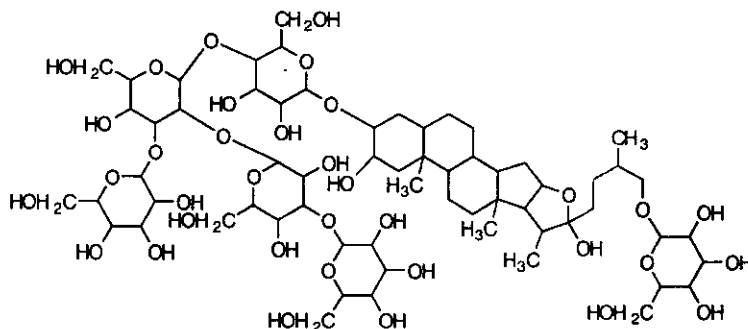
-----文献-----

Muehlecker, W. et al., *Angew. Chem., Int. Ed.*, 1997, 36, 401
Muehlecker, W. et al., *Helv. Chim. Acta*, 2000, 83, 278

§ Furostane-2,3,22,26-tetrol; (2 α ,3 β ,5 α ,22 α ,25*R*)-form, 3-*O*-[β -D-Glucopyranosyl-(1 \rightarrow 3)]- β -D-glucopyranosyl-(1 \rightarrow 2)-[β -D-glucopyranosyl-(1 \rightarrow 3)]- β -D-glucopyranosyl-(1 \rightarrow 4)- β -*O*-galactopyranoside], 26- β -D-glucopyranoside

[化学名・別名] Capsicoside A. Capsicoside
[CAS No.] 54999-56-3
[化合物分類] ステロイド (Furostane steroid). (C27).
[構造式]

[分子式] $C_{63}H_{106}O_{35}$
[分子量] 1423.509
[正確な分子量] 1422.651475
[基原] *Capsicum annuum*
[性状] 無定型
[比旋光度]: $[\alpha]_D^{25}$ -37.1 (c, 0.8 in Py)
[その他のデータ] 構造式は 1994 年に改正された



-----文献-----

Yahara, S. et al., *Phytochemistry*, 1994, 37, 831, (Capsicoside)

§ Furostane-2,3,22,26-tetrol; (2 α ,3 β ,5 α ,22 α ,25*R*)-form, 3-*O*-[β -D-Glucopyranosyl-(1 \rightarrow 3)]-[β -D-glucopyranosyl-(1 \rightarrow 2)]- β -D-glucopyranosyl-(1 \rightarrow 4)- β -D-galactopyranoside], 26-*O*-

-D-glucopyranoside, 22-O-Me ether

[化学名・別名] Capsicoside B

[CAS No.] 160219-65-8

[化合物分類] ステロイド (Furostane steroid). (C27).

[構造式]

[分子式] $C_{58}H_{98}O_{30}$

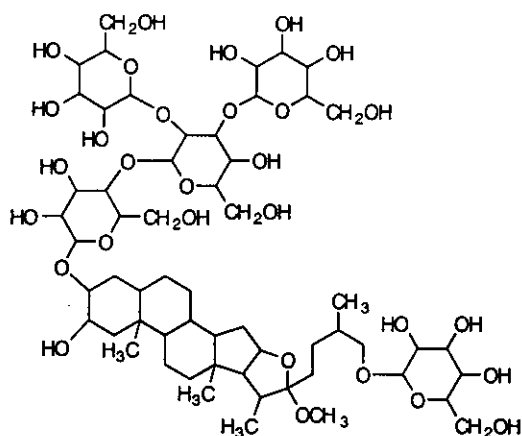
[分子量] 1275.394

[正確な分子量] 1274.6143

[基原] *Capsicum annuum*

[性状] 粉末

[比旋光度]: $[\alpha]_D^{26} -49.3$ (c, 0.73 in Py)



-----文献-----

Yahara, S. et al., *Phytochemistry*, 1994, 37, 831, (Capsicoside)

§ Furostane-2,3,22,26-tetrol; (2 α,3 β,5 α,22 α,25R)-form, 3-O-[β-D-Glucopyranosyl-(1 → 2)-β-D-glucopyranosyl-(1 → 4)-β-D-galactopyranoside], 26-O-β-D-glucopyranoside, 22-O-Me ether

[化学名・別名] Capsicoside C

[CAS No.] 160219-66-9

[化合物分類] ステロイド (Furostane steroid). (C27).

[構造式]

[分子式] $C_{52}H_{88}O_{25}$

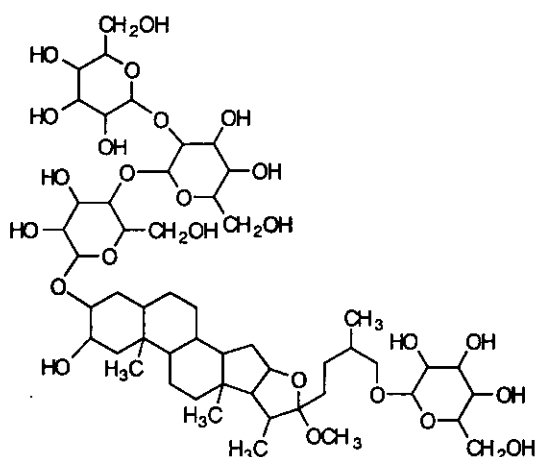
[分子量] 1113.252

[正確な分子量] 1112.561475

[基原] *Capsicum annuum*

[性状] 粉末

[比旋光度]: $[\alpha]_D^{26} -42.9$ (c, 0.53 in Py)



-----文献-----

Yahara, S. et al., *Phytochemistry*, 1994, 37, 831, (Capsicoside)

§ Furostane-3,22,26-triol; (3 β,5 α,22 ξ,25R)-form, 3-O-[β-D-Glucopyranosyl-(1 → 4)-β-D-glucopyranosyl-(1 → 2)-[β-D-xylopyranosyl-(1 → 3)]-β-D-glucopyranosyl-(1 → 4)-β-D-galactopyranoside], 26-O-β-D-glucopyranoside

[化学名・別名] Capsicoside D

[CAS No.] 160260-25-3

[化合物分類] 脂肪族化合物 (Simple heteroalicyclics (1 × N)), ステロイド (Furostane steroid). (C27).

[構造式]

[分子式] $C_{62}H_{104}O_{33}$

[分子量] 1377.484

[正確な分子量]

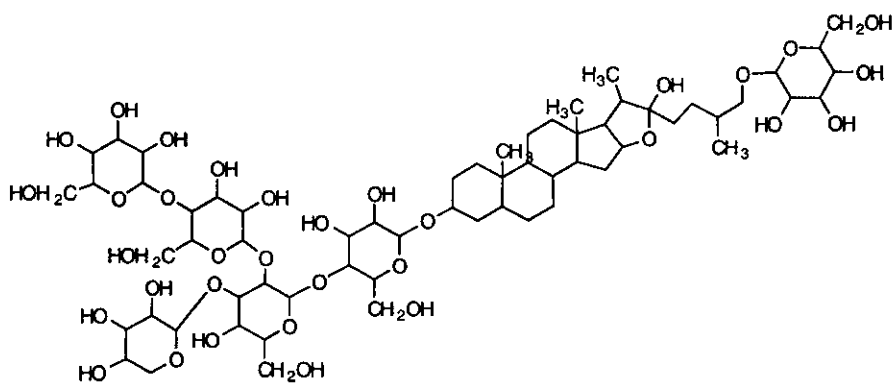
1376.645995

[基原] *Capsicum annuum*

[性状] 粉末

[比旋光度]: $[\alpha]_D^{28} -53.9$

(c, 0.5 in Py)



-----文献-----

Yahara, S. et al., *Phytochemistry*, 1994, 37, 831; 1996, 43, 1069, (Capsicoside D, Protodegalactotigonin, Torvoside F)

§ Furostane-3,22,26-triol; (3 β ,5 α ,22 ξ ,25*R*)-form, 3-*O*-[β -D-Glucopyranosyl-(1 \rightarrow 2)]-[β -D-xylopyranosyl-(1 \rightarrow 3)]- β -D-glucopyranosyl-(1 \rightarrow 4)- β -D-galactopyranoside], 26-*O*- β -D-glucopyranoside

[化学名・別名] Protodegalactotigonin

[CAS No.] 126643-25-2

[化合物分類] ステロイド (Furostane steroid). (C27).

[構造式]

[分子式] C₅₅H₉₄O₂₈

[分子量] 1215.342

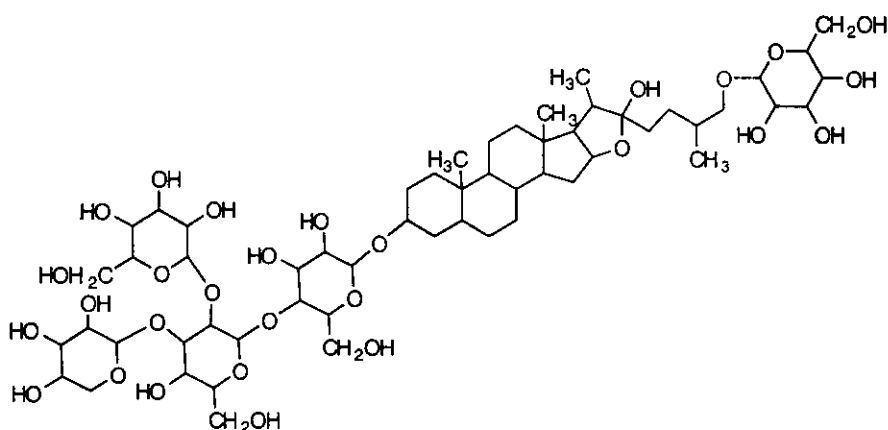
[正確な分子量] 1214.59317

[基原] *Capsicum annuum*

[性状] 粉末

[比旋光度]: [α]_D²⁰ -14.8

(c, 0.1 in Py)



-----文献-----

Yahara, S. et al., *Phytochemistry*, 1994, 37, 831; 1996, 43, 1069, (Capsicoside D, Protodegalactotigonin, Torvoside F)

§ Grossamide

[CAS No.] 80510-06-1

[化合物分類] アルカロイド化合物 (Simple tyramine alkaloid)

[構造式]

[分子式] C₂₆H₂₆N₂O₈

[分子量] 624.689

[正確な分子量] 624.247168

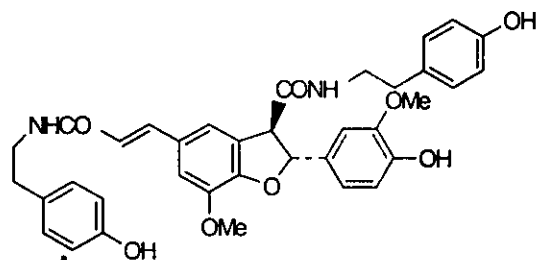
[基原] 次の植物から分離: *Cannabis sativa* (アサ科),

Capsicum annuum var. *grossum* (ナス科)

[用途] プロテアーゼ抑制因子

[性状] 結晶 (MeOH/CHCl₃/cyclohexane)

[融点] Mp 174-175 °C (133-135 °C)



-----文献-----

Yoshihara, T. et al., *Agric. Biol. Chem.*, 1981, 45, 2593; 1983, 47, 217, (分離, 合成法, 構造決定)

Sakakibara, I. et al., *Phytochemistry*, 1991, 30, 3013, (分離)

Lajide, L. et al., *Phytochemistry*, 1995, 40, 1105, (Demethylgrossamide)

Li, J.-X. et al., *Planta Med.*, 1998, 64, 628, (Tribulusamide)

§ 6-Hydroxy-4,6-dimethyl-3-hepten-2-one

[CAS No.] 83348-17-8

[化合物分類] 脂肪族化合物 (Branched alkenic aldehyde and ketone)

[分子式] C₉H₁₆O₂

[分子量] 156.224

[正確な分子量] 156.11503

[基原] *Streptomyces olivaceus* によって作られる。、また *Capsicum annuum* var. *angulosum* にも見られる

[性状] 物理化学的性質については報告がない

-----文献-----

Kimura, K. et al., CA, 1982, 97, 159552, (分離)
Grote, R. et al., Annalen, 1990, 525, (分離, H-NMR, C13-NMR)

§ 3-Hydroxy-1,6,10,14-phytatetraen-16-oic acid; (3*S*,6*E*,10*E*,14*E*)-form, 3-*O*-[β-D-Glucopyranosyl (1→2)-D-glucopyranoside]

[化学名・別名] Capsianoside IV. Capsianside IV

[CAS No.] 121924-05-8

[化合物分類] テルペノイド (Phytane diterpenoid)

[構造式]

[分子式] C₃₂H₅₂O₁₁

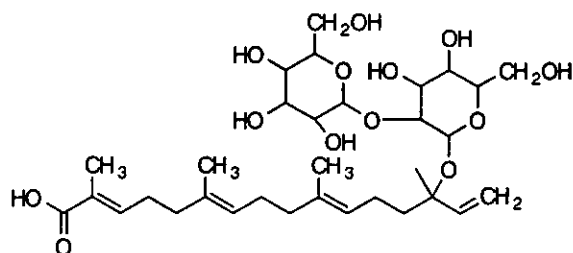
[分子量] 644.755

[正確な分子量] 644.340795

[基原] *Capsicum annuum*

[性状] 粉末

[比旋光度]: [α]_D²⁰ -8.4 (c, 0.6 in MeOH)



-----文献-----

Izumitani, Y. et al., Chem. Pharm. Bull., 1990, 38, 1299, (分離, IR, H-NMR, C13-NMR, Mas)

§ Icariside E:

[CAS No.] 126176-79-2

[化合物分類] リグナン化合物 (Neolignan)

[構造式]

[分子式] C₂₆H₃₄O₁₁

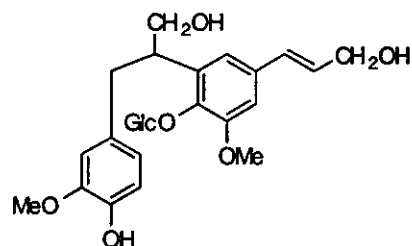
[分子量] 522.548

[正確な分子量] 522.210115

[基原] *Capsicum annuum*, *Epimedium diphyllum*

[性状] 無定型の粉末

[比旋光度]: [α]_D²² -118.8 (c, 1.04 in MeOH)



-----文献-----

Miyase, T. et al., Phytochemistry, 1989, 28, 3483, (分離, H-NMR, C13-NMR)

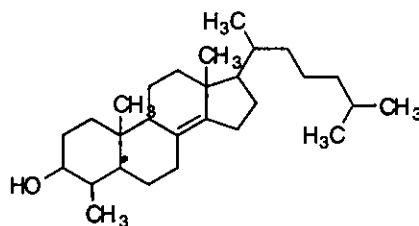
Yoshikawa, K. et al., Phytochemistry, 1995, 39, 659, (Ehletianol D)

Iorizzi, M. et al., J. Agric. Food Chem., 2001, 49, 2022-2029, (分離, H-NMR, C13-NMR)

§ 4-Methyl-8(14)-cholesten-3-ol; (3β,4α,5α)-form

[化合物分類] ステロイド (Neutral cholestane steroid). (C27).

[構造式]



[基原] *Capsicum annuum*

-----文献-----

Matsumoto, T. et al., Phytochemistry, 1983, 22, 2621

§ Mutatochrome

[化学名・別名] 5,8-Epoxy-5,8-dihydro-β,β-carotene. Citroxanthin. Flavacin

[CAS No.] 515-06-0

[関連 CAS No.] 15678-54-3, 31613-49-7

[化合物分類] テルペノイド (Tetraterpenoid)

[構造式]

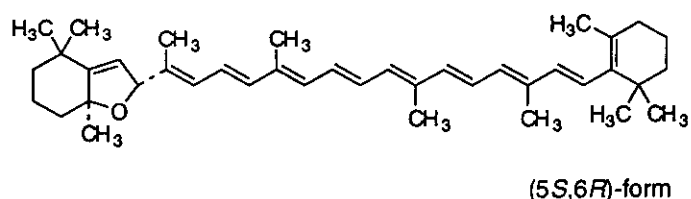
[分子式] C₄₀H₅₆O

[分子量] 552.882

[正確な分子量] 552.433115

[基原] オレンジの皮, 藍藻植物. Also in *Calendula officinalis*, *Capsicum annuum* (paprika), *Delonix regia*, その他

[性状] 黄-橙色の結晶 (C₆H₆/MeOH)



[融点] Mp 167 °C

-----文献-----

Karrer, P. et al., *Helv. Chim. Acta*, 1944, 28, 1695; 1946, 29, 229; 1947, 30, 536, (分離, 構造決定, 合成法)
Hertzberg, S. et al., *Phytochemistry*, 1966, 5, 565; 1971, 10, 3121
Ignasiak, T. et al., *Biochem. Syst. Ecol.*, 1973, 1, 97; 1975, 2, 177, (分離, Cryptoflavin)
Eschenmoser, W. et al., *Helv. Chim. Acta*, 1984, 67, 170
Ebert, G. et al., *Helv. Chim. Acta*, 1985, 24, 29, (分離, Cryptoflavin)

§ 1-Nonen-4-one (CAS 名)

[CAS No.] 61168-10-3

[化合物分類] 脂肪族化合物 (Unbranched alkenic aldehyde and ketone)

[構造式] $\text{H}_3\text{C}(\text{CH}_2)_4\text{COCH}_2\text{CH}=\text{CH}_2$

[分子式] $\text{C}_9\text{H}_{16}\text{O}$

[分子量] 140.225

[基原] Detected in volatile constituents of *Capsicum annuum grossum*

[沸点] Bp₂₀ 68-71 °C

-----文献-----

Buttery, R.G. et al., *J. Agric. Food Chem.*, 1969, 17, 1322, (Mass, ガスクロマト)
Arase, A. et al., *Bull. Chem. Soc. Jpn.*, 1984, 57, 209, (合成法, H-NMR, IR, Mas)
Wu, C.M. et al., *J. Am. Oil Chem. Soc.*, 1986, 63, 1172, (生育)

§ Octopamine; (ξ)-form, N-(4-Hydroxy-E-cinnamoyl)

[化学名・別名] *N-trans-p-Coumaroyloctopamine*

[CAS No.] 66648-45-1

[その他の CAS No.] 88700-34-9, 152433-78-8

[化合物分類] アルカロイド化合物 (Cinnamic acid amide)

[構造式]

[分子式] $\text{C}_{17}\text{H}_{17}\text{NO}_4$

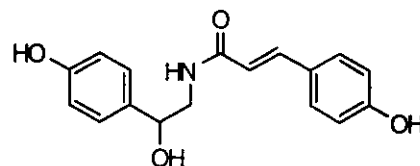
[分子量] 299.326

[正確な分子量] 299.115759

[基原] 次の植物から得られるアルカロイド: *Capsicum annuum var. grossum*, *Ophiopogon japonicus*, *Solanum khasianum*

[性状] 結晶

[融点] Mp 214-215 °C



-----文献-----

Matsuda, F. et al., *Biosci., Biotechnol., Biochem.*, 2000, 64, 625, (*N-Coumaroyloctopamine*)
Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials*, 8th edn., Van Nostrand Reinhold, 1992, AKT250

§ Octopamine; (ξ)-form, N-(4-Hydroxy-3-methoxy-E-cinnamoyl)

[化学名・別名] *N-trans-Feruloyloctopamine*

[CAS No.] 66648-44-0

[化合物分類] アルカロイド化合物 (Cinnamic acid amide)

[構造式]

[分子式] $\text{C}_{18}\text{H}_{19}\text{NO}_5$

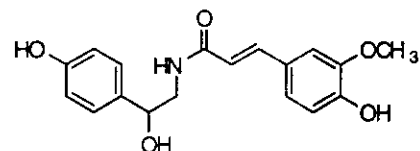
[分子量] 329.352

[正確な分子量] 329.126324

[基原] *Antidesma membranaceum*, *Capsicum annuum var. grossum*, *Solanum khasianum*

[性状] 粉末

[融点] Mp 164-165 °C (as tri-Ac)



-----文献-----

Axelrod, J. et al., *Nature (London)*, 1977, 265, 501, (レビュー)
Smith, T.A., *Phytochemistry*, 1977, 16, 9, (生育)
Doetsch, P.W. et al., *J. Chromatogr.*, 1980, 189, 79, (生育, 誘導體)
Yoshihara, T. et al., *Agric. Biol. Chem.*, 1981, 45, 2593, (cinnamoyl deriv)

Redouane, K. et al., *Agressologie*, 1984, 25, 3, (レビュー)
 Midgley, J.M. et al., *J.C.S. Perkin 2*, 1989, 963, (結晶構造, 絶対構造, 成書)
 Matsuda, F. et al., *Biosci., Biotechnol., Biochem.*, 2000, 64, 625, (*N*-Coumaroyloctopamine)

§ 1,6,10,14-Phytatetraene-3,17-diol; (3*S*,6*E*,10*E*,14*Z*)-form, 3-*O*-[β-*D*-Glucopyranosyl-(1 → 2)-β-*D*-glucopyranoside], 17-*O*-[α-*L*-rhamnopyranosyl-(1 → 6)-β-*D*-glucopyranosyl-(1 → 2)-β-*D*-glucopyranoside]

[化学名・別名] Capsianoside III. Capsianside III

[CAS No.] 121961-81-7

[化合物分類] テルペノイド (Phytane diterpenoid)

[構造式]

[分子式] C₅₀H₈₄O₂₆

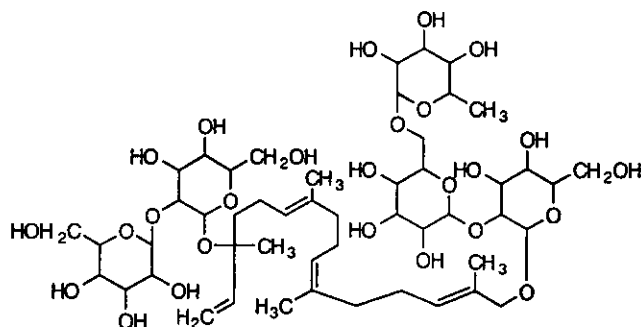
[分子量] 1101.198

[正確な分子量] 1100.52509

[基原] 次の植物から分離: *Capsicum annuum*

[性状] 粉末

[比旋光度]: [α]_D²⁰ -26.4 (c, 1 in MeOH)



-----文献-----

Izumitani, Y. et al., *Chem. Pharm. Bull.*, 1990, 38, 1299, (Capsianoside)

§ 1,6,10,14-Phytatetraene-3,17-diol; (3*S*,6*E*,10*E*,14*Z*)-form, 3-*O*-[β-*D*-Glucopyranosyl-(1 → 2)-β-*D*-glucopyranoside], 17-*O*-[α-*L*-rhamnopyranosyl-(1 → 6)-β-*D*-glucopyranosyl-(1 → 3)-α-*L*-rhamnopyranoside]

[化学名・別名] Capsianoside II. Capsianside II

[CAS No.] 121961-80-6

[化合物分類] テルペノイド (Phytane diterpenoid)

[構造式]

[分子式] C₅₀H₈₄O₂₅

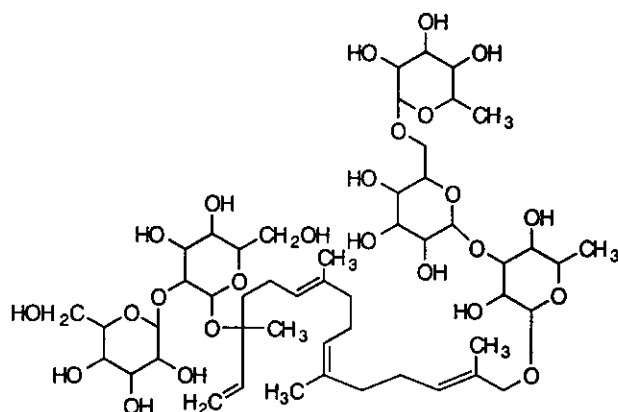
[分子量] 1085.199

[正確な分子量] 1084.530175

[基原] *Capsicum annuum*

[性状] 粉末

[比旋光度]: [α]_D²⁰ -35.5 (c, 1 in MeOH)



-----文献-----

Izumitani, Y. et al., *Chem. Pharm. Bull.*, 1990, 38, 1299, (Capsianoside)

§ Spirostane-2,3-diol; (2α,3β,5α,25*R*)-form, 3-*O*-[β-*D*-Galactopyranosyl-(1 → 4)-β-*D*-galactopyranosyl-(1 → 2)-[β-*D*-xylopyranosyl-(1 → 3)]-β-*D*-glucopyranosyl-(1 → 4)-β-*D*-galactopyranoside]

[化学名・別名] Capsicoside E₁

Capsicosin E₁

[CAS No.] 109575-83-9

[化合物分類] ステロイド (Spirostane steroid). (C27)

[構造式]

[分子式] C₅₆H₉₂O₂₈

[分子量] 1213.326

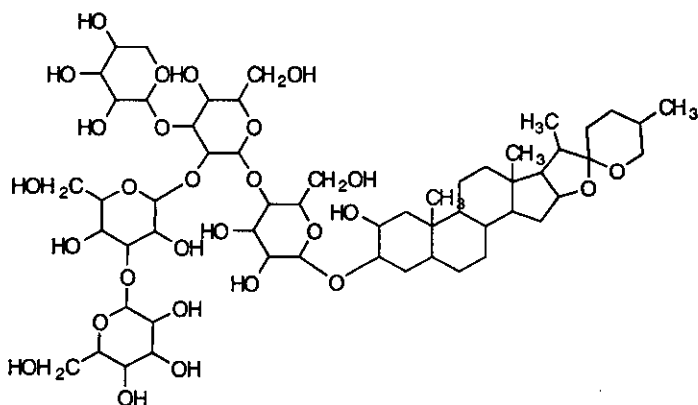
[正確な分子量] 1212.57752

[基原] *Capsicum annuum*

[性状] 結晶

[融点] Mp 253-254 °C

[比旋光度]: [α]_D²⁰ -67 (c, 4.8 in MeOH/CHCl₃)



-----文献-----

Karrer, W. et al., *Konstitution und Vorkommen der Organischen Pflanzenstoffe*, 2nd edn., Birkhäuser Verlag, Basel, 1972, nos. 2101-2104

Tschesche, R. et al., *Chem. Ber.*, 1975, 108, 265, (Capsicosin)

Gutsa, E.V. et al., *Khim. Pri. Soedin.*, 1986, 22, 708; 1987, 23, 307; *Chem. Nat. Compd. (Engl. Transl.)*, 1986, 22, 661; 1987, 23, 260, (Capsicoside)

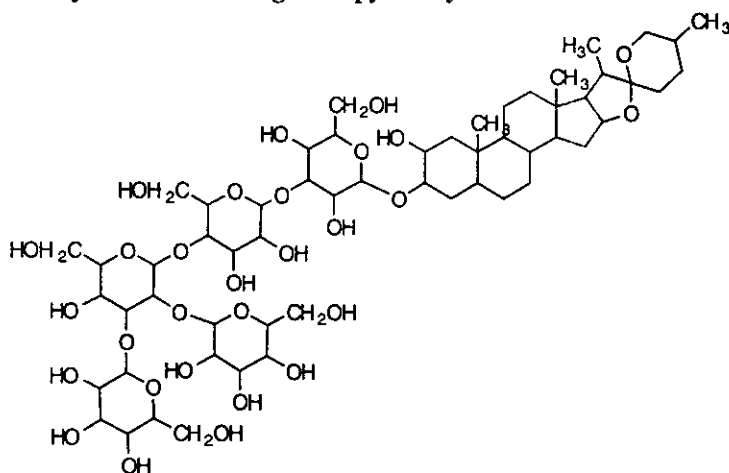
§ Spirostane-2,3-diol; (2 α ,3 β ,5 α ,25*R*)-form, 3-*O*-[β -D-Glucopyranosyl-(1 \rightarrow 2)]- [β -D-glucopyranosyl-(1 \rightarrow 3)]- β -D-glucopyranosyl-(1 \rightarrow 4)- β -D-galactopyranosyl-(1 \rightarrow 3)- β -D-glucopyranoside]

[化学名・別名] Capsicosin

[CAS No.] 54963-35-8

[化合物分類] ステロイド (Spirostane steroid). (C27)

[構造式]



[分子式] $C_{57}H_{96}O_{29}$

[分子量] 1243.352

[正確な分子量] 1242.588085

[基原] *Capsicum annuum*

[性状] 結晶 (MeOH)

[融点] Mp 285-290 $^{\circ}C$ (分解)

[比旋光度]: $[\alpha]_D^{22}$ -47 (c, 0.1 in MeOH 溶液)

-----文献-----

Karrer, W. et al., *Konstitution und Vorkommen der Organischen Pflanzenstoffe*, 2nd edn., Birkhäuser Verlag, Basel, 1972, nos. 2101-2104

Tschesche, R. et al., *Chem. Ber.*, 1975, 108, 265, (Capsicosin)

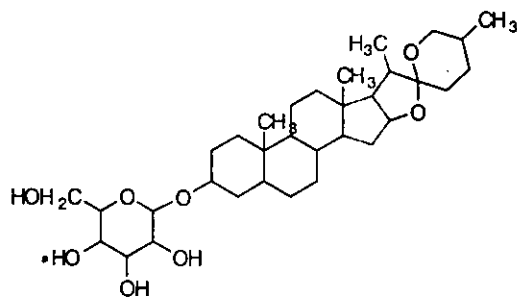
§ Spirostan-3-ol; (3 β ,5 α ,25*R*)-form, 3-*O*- β -D-Galactopyranoside

[化学名・別名] Capsicoside A₂

[CAS No.] 35959-24-1

[化合物分類] ステロイド (Spirostane steroid). (C27)

[構造式]



[分子式] $C_{33}H_{54}O_8$

[分子量] 578.785

[正確な分子量] 578.38187

[基原] *Capsicum annuum*

-----文献-----

Karrer, W. et al., *Konstitution und Vorkommen der Organischen Pflanzenstoffe*, 2nd edn., Birkhäuser Verlag, Basel, 1972, nos. 2087; 2090-2092, (生育)

Gutsa, E.V. et al., *Khim. Pri. Soedin.*, 1987, 23, 242; 1989, 25, 582; *Chem. Nat. Compd. (Engl. Transl.)*, 1987, 23, 202; 1989, 25, 500, (Capsicoside)

§ Spirostan-3-ol; (3 β ,5 α ,25*R*)-form, 3-*O*-[β -D-Glucopyranosyl-(1 \rightarrow 4)]- β -D-galactopyranoside]

[化学名・別名] Capsicoside B₂

[CAS No.] 110124-76-0

[化合物分類] ステロイド (Spirostane steroid). (C27)

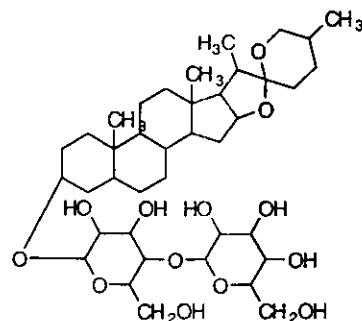
[構造式]

[分子式] $C_{39}H_{64}O_{13}$

[分子量] 740.927

[正確な分子量] 740.434695

[基原] *Capsicum annuum*



-----文献-----

Karrer, W. et al., *Konstitution und Vorkommen der Organischen Pflanzenstoffe*, 2nd edn., Birkhäuser Verlag, Basel, 1972, nos. 2087; 2090-2092, (生育)

Gutsa, E.V. et al., *Khim. Prir. Soedin.*, 1987, 23, 242; 1989, 25, 582; *Chem. Nat. Compd. (Engl. Transl.)*, 1987, 23, 202; 1989, 25, 500, (Capsicoside)

§ Spirostan-3-ol; (3 β,5 α,25R)-form, 3-O-[β-D-Xylopyranosyl-(1 → 3)-β-D-glucopyranosyl-(1 → 4)-galactopyranoside]

[化学名・別名] Capsicoside C₂

[CAS No.] 125456-09-9

[化合物分類] ステロイド (Spirostane steroid). (C27)

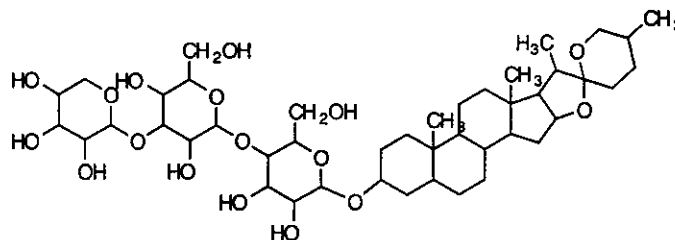
[構造式]

[分子式] C₄₄H₇₂O₁₇

[分子量] 873.043

[正確な分子量] 872.476955

[基原] *Capsicum annuum*



-----文献-----

Karrer, W. et al., *Konstitution und Vorkommen der Organischen Pflanzenstoffe*, 2nd edn., Birkhäuser Verlag, Basel, 1972, nos. 2087; 2090-2092, (生育)

Gutsa, E.V. et al., *Khim. Prir. Soedin.*, 1987, 23, 242; 1989, 25, 582; *Chem. Nat. Compd. (Engl. Transl.)*, 1987, 23, 202; 1989, 25, 500, (Capsicoside)

§ Spirost-5-en-3-ol; (3 β,25R)-form, 3-O-β-D-Galactopyranoside

[化学名・別名] Capsicoside A₃

[CAS No.] 14270-72-5

[化合物分類] ステロイド (Spirostane steroid). (C27)

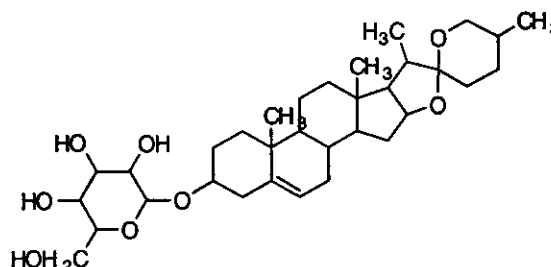
[構造式]

[分子式] C₃₃H₅₂O₈

[分子量] 576.769

[正確な分子量] 576.36622

[基原] *Capsicum annuum*



-----文献-----

Karrer, W. et al., *Konstitution und Vorkommen der Organischen Pflanzenstoffe*, 2nd edn., Birkhäuser Verlag, Basel, 1972, no. 2095, (生育, Diosgenin)

Gutsa, E.V. et al., *Khim. Prir. Soedin.*, 1987, 23, 242; *Chem. Nat. Compd. (Engl. Transl.)*, 1987, 23, 202, (Capsicoside A₃)

§ Spirost-5-en-3-ol; (3 β,25R)-form, 3-O-[β-D-Xylopyranosyl-(1 → 3)-β-D-glucopyranosyl-(1 → 4)-β-D-galactopyranoside]

[化学名・別名] Capsicoside C₃

[CAS No.] 125456-10-2

[化合物分類] ステロイド (Spirostane steroid). (C27)

[構造式]

[分子式] C₄₄H₇₀O₁₇

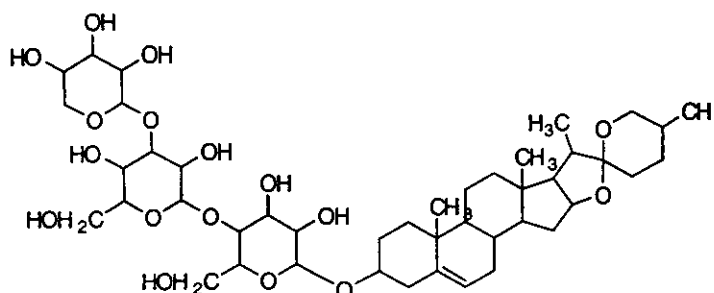
[分子量] 871.027

[正確な分子量] 870.461305

[基原] *Capsicum annuum*

[融点] Mp 263-265 °C

[比旋光度]: [α]_D²⁰ -60 (c, 1.0 in MeOH)



-----文献-----

Karrer, W. et al., *Konstitution und Vorkommen der Organischen Pflanzenstoffe*, 2nd edn., Birkhäuser Verlag,

Basel, 1972, no. 2095, (生育, Diosgenin)
Chen, S. et al., Tet. Lett., 1987, 28, 5603, (saponin)
(Capsicoside C.)

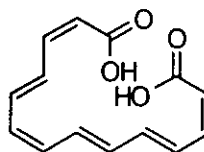
§ 2,4,6,8,10,12-Tetradecaenedioic acid; (*all-E*)-form

[化学名・別名] Corticrocin

[CAS No.] 505-53-3

[化合物分類] 脂肪族化合物 (Unbranched alkenic methyl ester)

[構造式]



[基原] カビ *Corticium croceum* の色素。またパプリカ (*Capsicum annuum*), *Encephalartos* spp. から得られる

[性状] 橙-赤色の針状結晶

[融点] 約 300℃ で昇華, 分解

[溶解性] ほとんどの溶媒に不溶

-----文献-----

Erdtman, H., Acta Chem. Scand., 1948, 2, 209, (分離, 構造決定)

Rives-Arnau, V., Macromolecules, 1985, 18, 2088 Kahner, L. et al., Phytochemistry, 1998, 49, 1693, (Boletocrocin D)

Schreiner, T. et al., Z. Naturforsch., C, 1998, 53, 4, (分離, 合成法)

§ 3,13,19-Trihydroxy-1,6,10,14-phytatetraen-16-oic acid; (3*S*,6*Z*,10*E*,14*E*)-form, 3-*O*-β-D-Glucopyranoside

[化学名・別名] Capsianoside V. Capsianside V

[CAS No.] 121924-06-9

[化合物分類] テルペノイド (Phytane diterpenoid)

[構造式]

[分子式] C₂₆H₄₂O₁₀

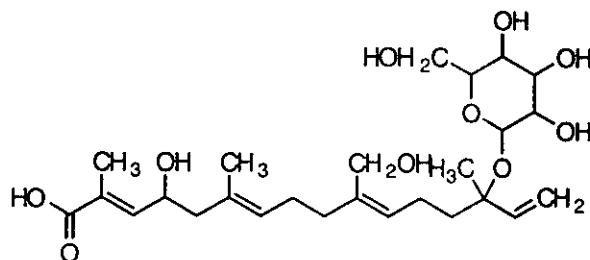
[分子量] 514.612

[正確な分子量] 514.2778

[基原] *Capsicum annuum*

[性状] 粉末

[比旋光度]: [α]_D 0 (MeOH)



-----文献-----

Izumitani, Y. et al., Chem. Pharm. Bull., 1990, 38, 1299, (分離, IR, H-NMR, C13-NMR, Mas)

§ § ナス科キダチトウガラシ (シマトウガラシ) (*Capsicum frutescens* L.) の果実または茎葉。
「カサイ」参照

***** トウキ (Toki) *****

§ § セリ科トウキ (*Angelica acutiloba* Kitagawa) の根または葉。

§ α-L-Arabinofuranosyl-(1→3)-[α-L-arabinofuranosyl-(1r5)]-L-arabinose

[化合物分類] 炭水化物 (Oligosaccharide)

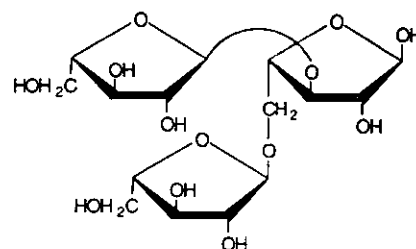
[構造式]

[分子式] C₁₃H₂₀O₁₃

[分子量] 414.363

[正確な分子量] 414.137345

[基原] the anti-complementary arabinogalactan (AG IIB-1), *Angelica acutiloba* の根から分離される



-----文献-----

Kiyohara, H. et al., Carbohydr. Res., 1987, 167, 221, (分離, ガスクロマト, Mass, chromatog)

§ 7,8-Dihydro-7-hydroxy-8,8-dimethyl-2H,6H-benzo[1,2-b:5,4-b']dipyran-2-one, 2-Methyl-2-butenoyl (Z-)

[化学名・別名] Acutilobin. Decursinol angelate

[CAS No.] 130848-06-5

[化合物分類] ベンゾピラノイド (7-Oxygenated coumarins, 6-substituted)

[構造式]

[分子式] $C_{19}H_{20}O_5$

[分子量] 328.364

[正確な分子量] 328.131075

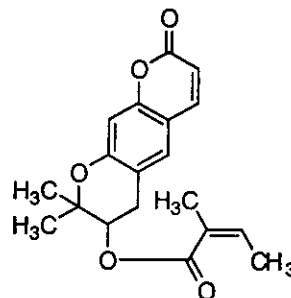
[基原] *Angelica acutiloba*, *Angelica gigas*

[用途] 抗腫瘍剤

[性状] プリズム結晶 (MeOH)

[融点] Mp 94-95 °C

[比旋光度]: $[\alpha]_D^{25} +172.9$ (c, 1.3 in $CHCl_3$)



-----文献-----

Hata, K. et al., Tet. Lett., 1966, 1461, (分離, Decursinol)

Ahn, K.-S. et al., Planta Med., 1997, 63, 360, (Acutilobin)

§ 1,9-Heptadecadiene-4,6-diyne-3,8-diol; (3R,8S,9Z)-form

[化学名・別名] Falcarindiol

[CAS No.] 55297-87-5

[化合物分類] 薬物: 抗菌性剤 (Antibacterial agent), 薬物: 鎮痛薬 (Analgesic), 脂肪族化合物 (Acetylenic alcohol), 薬物: 抗カビ薬 (Antifungal agent)

[構造式]

[基原] 一般的なニンジン *Daucus carota* や *Angelica acutiloba* を含むいくつかの植物の根. 生薬成分: Toki

[用途] 抗カビ, 抗菌, 鎮痛活性を持つ. 抗痛覚剤

[性状] 淡黄色のオイル

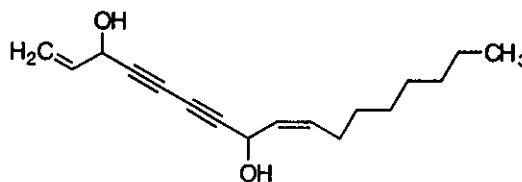
[比旋光度]: $[\alpha]_D +204.8$ (c, 1 in $CHCl_3$)

[溶解性] メタノール, エーテルに可溶

[Log P 計算値] Log P 2.49 (計算値)

[UV]: [neutral] λ_{max} 231 (); 244 (); 256 () (MeOH) [neutral] λ_{max} 233 (ϵ 1000); 245 (ϵ 1000); 259 (ϵ 800) (EtOH) [neutral] λ_{max} 232 (ϵ 400); 244 (ϵ 400); 258 (ϵ 200) (Et₂O)

[その他のデータ] 薬理的活性な異性体



-----文献-----

Bohlmann, F. et al., Chem. Ber., 1961, 94, 958; 3189; 1967, 100, 3450; 3454; 1971, 104, 2033; 1975, 108, 511, (分離, 誘導體)

Bentley, R.K. et al., J.C.S. (C), 1969, 685, (分離, IR, UV, H-NMR)

Tanaka, S. et al., Arzneim.-Forsch., 1977, 27, 2039, (薬理)

Kemp, M.S., Phytochemistry, 1978, 17, 1002, (分離, 性質)

Satoh, A. et al., Biosci., Biotechnol., Biochem., 1996, 60, 152, (分離, H-NMR, Mas)

Bernart, M.W. et al., J. Nat. Prod., 1996, 59, 748, (分離, 性質)

Kobaisy, M. et al., J. Nat. Prod., 1997, 60, 1210, (分離, H-NMR, C13-NMR, 絶対構造, Oplopandiol)

§ 7-Hydroxy-6-methoxy-2H-1-benzopyran-2-one (CAS 名)

[化学名・別名] 7-Hydroxy-6-methoxycoumarin. Scopoletin. Aesculetin 6-methyl ether. Chrysotropic acid. Gelseminic acid. β -Methylaesculetin. Buxuletin. Escopoletin. Scopoletol. Baogongteng B

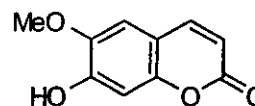
[CAS No.] 92-61-5

[関連 CAS No.] 13544-37-1, 73435-97-9

[化合物分類] ベンゾピラノイド (6,7-Dioxygenated coumarin), 薬物: 鎮痙薬 (Antispasmodic)

[構造式]

[分子式] $C_{11}H_{10}O_4$



[分子量] 192.171

[正確な分子量] 192.04226

[基原] 植物界に広く含有する, 例えば, *Gelsemium sempervirens* の根, *Atropa belladonna*, *Convolvulus scammonia*, *Ipomoea orizabensis*, *Prunus serotina*, *Fabiana imbricata*, また, *Diospyros* spp., *Peucedanum* spp., *Heracleum* spp., *Skimmia* spp. 生薬: Toki (from *Angelica acutiloba*)

[用途] 鎮痙薬

[性状] 針状結晶もしくはプリズム結晶 (EtOH)

[融点] Mp 204 °C

[溶解性] メタノール, ベンゼンに可溶

[Log P 計算値] Log P 1.33 (計算値)

[UV]: [neutral] λ_{max} 229 (ϵ 13800); 252 (ϵ 9120); 260 (sh) (ϵ 8710); 297 (ϵ 9550); 344 (ϵ 13500) (MeOH) (Derap) [neutral] λ_{max} 230 (); 255 (); 295 (); 345 () (MeOH) [neutral] λ_{max} 228 (ϵ 23000); 254 (ϵ 7600); 297 (ϵ 8700); 345 (ϵ 20500) (EtOH)

[傷害・毒性] 50%致死量 (LD₅₀) (ラット, 経口) 3800 mg/kg

[化学物質毒性データ総覧 (RTEC) 登録番号] GN6930000

-----文献-----

Karrer, W. et al., *Konstitution und Vorkommen der Organischen Pflanzenstoffe*, 2nd edn., Birkhäuser Verlag, Andrianova, V.B. et al., *Khim. Prir. Soedin.*, 1975, 11, 89; *Chem. Nat. Compd.* (Engl. Transl.), 1975, 11, 91, (Scopoletin, 分離)

RTECS (化学物質毒性データ)

生体影響物質 : 医薬品.

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 : 経口投与.

被験動物 : げっ歯類-ラット.

投与量・期間 : 3800 mg/kg

毒性影響 : 致死量以外に毒性影響に関する報告はない.

参考文献

AIPTAK Archives Internationales de Pharmacodynamie et de Therapie. (Heymans Institute of Pharmacology, De Pintelaan 185, B-9000 Ghent, Belgium) V.4- 1898- [Vol.,頁,年(19-)] 210,27,1974

<<試験方法>> LD50 試験 (50%致死量試験).

曝露経路 : 静脈注射

被験動物 : げっ歯類-マウス

投与量・期間 : 350 mg/kg

毒性影響 : 致死量以外に毒性影響に関する報告はない.

参考文献

ARZNAD Arzneimittel-Forschung. 医薬品. Research. (Editio Cantor Verlag, Postfach 1255, W-7960 Aulendorf, Fed. Rep. Ger.) V.1- 1951- [Vol.,頁,年(19-)] 18,1330,1968

§ Ligustilide; 9-Angeloyloxy

[化学名・別名] Angeloylsenkyunolide F

[CAS No.] 112899-64-6

[化合物分類] ベンゾフラノイド (Isobenzofuran)

[構造式]

[分子式] C₁₇H₂₀O₄

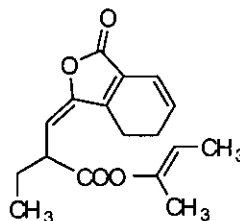
[分子量] 288.343

[正確な分子量] 288.13616

[基原] *Angelica acutiloba*

[性状] オイル

[比旋光度]: $[\alpha]_D^{25} +26$ (c, 0.7 in CHCl₃)

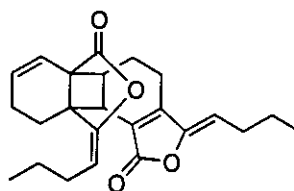


-----文献-----

Tsuchida, T. et al., *Chem. Pharm. Bull.*, 1987, 35, 4460, (Angeloylsenkyunolide F)

§ Tokinolide A

[CAS No.] 112899-62-4
 [化合物分類] ベンゾフラノイド (Isobenzofuran)
 [構造式]
 [分子式] $C_{24}H_{28}O_4$
 [分子量] 380.483
 [正確な分子量] 380.19876
 [基原] *Angelica acutiloba* の根
 [性状] オイル
 [その他のデータ] ラセミ体

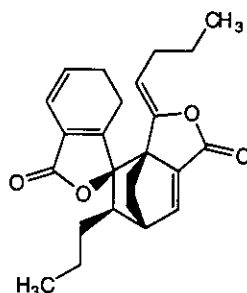


-----文献-----

Tsuchida, T. et al., Chem. Pharm. Bull., 1987, 35, 4460, (分離, 構造決定)

§ Tokinolide B

[CAS No.] 112966-16-2
 [化合物分類] ベンゾフラノイド (Isobenzofuran)
 [構造式]
 [分子式] $C_{24}H_{28}O_4$
 [分子量] 380.483
 [正確な分子量] 380.19876
 [基原] *Angelica acutiloba* の根
 [性状] オイル
 [その他のデータ] ラセミ体



-----文献-----

Tsuchida, T. et al., Chem. Pharm. Bull., 1987, 35, 4460, (分離, 構造決定)

Ogawa, Y. et al., Heterocycles, 1997, 45, 1869, (合成法, H-NMR)

*****ドウショクブツタンパクシツ (Protein)*****

§ § 畜肉, 魚介肉, 大豆, 小麦など。

*****ドウショクブツユシ (Oil and fat)*****

§ § 動植物原料より得られる食用油脂。

*****トウミツ (Molasse)*****

§ § イネ科サトウキビ (*Saccharum officinarum* L.) の茎より得た糖汁

「コクトウ」参照

§ § アカザ科サトウダイコン (*Beta vulgaris* L.) の根から得た糖汁から, 蔗糖を採取した残りの糖液。

「コンサイ」参照

*****トウモロコシ (Maize)*****

§ § イネ科トウモロコシ (*Zea mays* L.) の果実または柱頭 (ひげ) 。

§ 4-Acetyl-2(3H)-benzoxazolone (CAS 名)

[化学名・別名] 4-Acetylbenzoxazolin-2-one

[CAS No.] 70735-79-4

[化合物分類] アルカロイド化合物 (Oxazole and benzoxazole alkaloid)

[構造式]

[分子式] $C_9H_7NO_2$

[分子量] 177.159

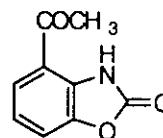
[正確な分子量] 177.042594

[基原] *Zea mays* (イネ科) の粒

[性状] 針状結晶 (Me₂CO 溶液)

[融点] Mp 217-218 °C

[UV]: [neutral] λ_{max} 250 (ϵ 9777); 320 (ϵ 5128) (MeOH) [base] λ_{max} 268 (ϵ 8912); 351 (ϵ 7413) (MeOH-NAOH)



-----文献-----

Fielder, D.A. et al., Tet. Lett., 1994, 35, 521, (分離, UV, IR, H-NMR, C13-NMR, Mass, 結晶構造)

Kluge, M. et al., J. Nat. Prod., 1998, 61, 821, (合成法)

§ γ -Carotene; 7',8'-Dihydro

[化学名・別名] β -Zeaxarotene. Carotene X. 7',8'-Dihydro- β , ψ -carotene

[CAS No.] 514-90-9

[化合物分類] テルペノイド (Tetraterpenoid)

[構造式]

[分子式] $C_{40}H_{58}$

[分子量] 538.898

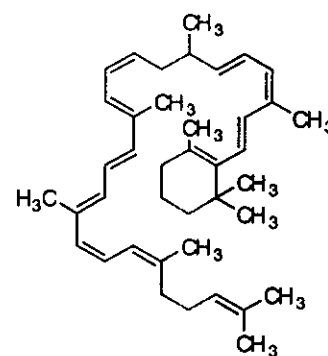
[正確な分子量] 538.45385

[基原] 次の植物から分離: トウモロコシ (*Zea mays*), *Citrus spp.*,

Phycomyces blakesleeanus 等の培養物.

[性状] 橙-黄色の板状結晶 (Me₂CO)

[融点] Mp 96-97 °C



-----文献-----

Goodwin, T.W., Annu. Rev. Biochem., 1955, 24, 497, (レビュー)

Rüegg, R. et al., Helv. Chim. Acta, 1961, 44, 994, (合成法, β -Zeaxarotene)

Williams, R.J.H. et al., Phytochemistry, 1965, 4, 759, (β -Zeaxarotene)

Straub, O. et al., Key to Carotenoids, 2nd edn., Birkhauser Verlag, Basel and Boston, 1987, 12, (成書)

§ 4-Coumaroylputrescine

[化学名・別名] 4-Hydroxycinnamoylputrescine

[CAS No.] 34136-53-3

[化合物分類] アルカロイド化合物 (Putrescine alkaloid)

[構造式]

[分子式] $C_{15}H_{18}N_2O_2$

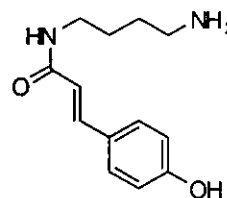
[分子量] 234.297

[正確な分子量] 234.136828

[基原] 次の植物から得られるアルカロイド: *Pennisetum americanum*, *Triticum vulgare*, *Zea mays*, *Persea gratissima*, *Salix sp.*, *Lycopersicon esculentum*, *Nicotiana tabacum*, *Petunia hybrid* (イネ科, クスノキ科, ヤナギ科, ナス科)

[性状] 弱い黄色の針状結晶・一水和物 (H₂O)

[融点] Mp 182-183.5 °C



-----文献-----

Stoessl, A. et al., Tet. Lett., 1969, 2807, (誘導体)

Mizusaki, S. et al., Phytochemistry, 1971, 10, 1347, (分離, 合成法)

Martin-Tanguy, J. et al., Phytochemistry, 1978, 17, 1927, (生育)

§ α -Cryptoxanthin

[化学名・別名] β , ϵ -Caroten-3-ol (CAS 名). Physoxanthin. Zeinoxanthin. α -Kryptoxanthin

[CAS No.] 24480-38-4

[化合物分類] テルペノイド (Tetraterpenoid)

[構造式]