

## 1270-1 (Sesquiterpene)

Name: *Allo-isoobtusol*<sup>(1)</sup>; *Cartilagineol*<sup>(2),(3)</sup>

{2,8-Dibromo-9-chloro-1,1,9-trimethyl-5-methylene-spiro[5.5]undecan-3-ol}

Origin: *Laurencia cartilaginea* (Ma'ili Pt Park, Wai'anae coast of O'ahu, Hawaii, USA)<sup>(1)</sup>;

*Laurencia* sp. (Taytay, Philippines)<sup>(2)</sup>;

*Laurencia tristicha* (the coast of Hsiao Liuchiu Island, Taiwan)<sup>(4)</sup>;

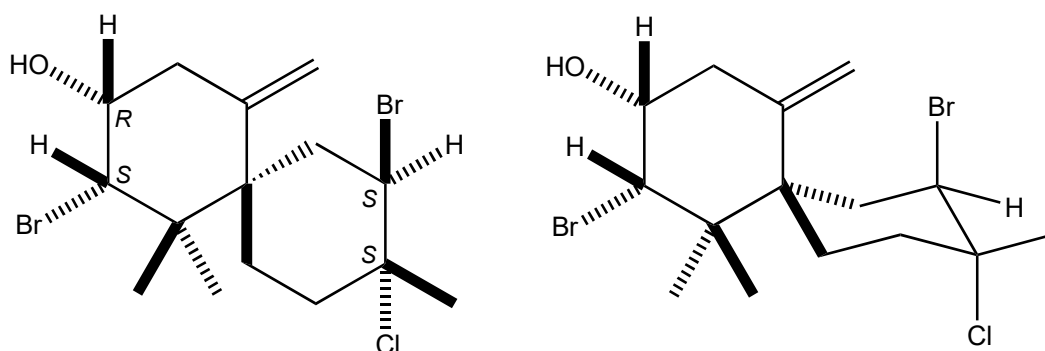
*Aplysia dactylomela* (the beach wrack of San Juan de la Rambla and Punta del Hidargo, Tenerife, Canary Islands, Spain)<sup>(5)</sup>;

Formula: C<sub>15</sub>H<sub>23</sub>Br<sub>2</sub>ClO

Mol. Wt.: 414.60

Opt. Rot.: [α]<sub>D</sub> -33.8 (CHCl<sub>3</sub>)<sup>(1)</sup>; [α]<sub>D</sub> -32 (CHCl<sub>3</sub>)<sup>(2)</sup>; [α]<sub>D</sub><sup>24</sup> -37 (CHCl<sub>3</sub>)<sup>(4)</sup>

Mp.: Oil<sup>(1)</sup>; 62-63<sup>(2)</sup>



### References and Notes

(1) Juagdan, E. G., Kalidindi, R, and Scheuer, P. 1997. *Tetrahedron*, **53**, 521-528. Two new chamigranes from an Hawaiian red alga, *Laurencia cartilaginea*. (UV, IR, <sup>1</sup>H-NMR, <sup>13</sup>C-NMR)

(together with ma'ilione, *allo-isoobtusol*, elatol, (Z)-(9*R*,10*S*)-10,15-dibromo-9-hydroxy-chamigra-1,3(15),7(14)-triene, (E)-(9*S*,10*R*)-10,15-dibromo-9-hydroxy-chamigra-1,3(15),7(14)-triene, isoobtusadiene)

(2) **Structure revision**; Francisco, M, E, Y., Turnbull, M. M., and Erickson, K. L. 1998. *Tetrahedron Lett.*, **39**, 5289-5292. *Cartilagineol*, the fourth lineage of *Laurencia*-derived polyhalogenated chamigrene.

(<sup>1</sup>H-NMR, <sup>13</sup>C-NMR) (together with *cartilagineol (allo-isoobtusol)*, ma'ilione, (Z)-(9*R*,10*S*)-10,15-dibromo-9-hydroxy-chamigra-1,3(15),7(14)-triene, (E)-(9*R*,10*S*)-10,15-dibromo-9-hydroxy-chamigra-1,3(15),7(14)-triene)

(3) **Stereochemistry and biogenetic consideration**; Guella, G., Oztunc, A., G, Mancini, I., and Pietra, F. 1997. *Tetrahedron Lett.*, **38**, 8261-8264. Stereochemical features of sesquiterpene metabolites as a distinctive trait of red seaweeds in the genus *Laurencia*.

(4) Chen, J.-Y., Huang, C.-Y., Lin, Y.-S., Hwang, T.-L., Wang, W.-L., Chiou, S.-F., and Sheu, J.-H. 2016. *J. Nat. Prod.*, **79**, 2315-2323. Halogenated sesquiterpenoids from *Laurencia tristicha* collected in Taiwan. (together with 8 new chamigranes; tristichones A-D, tristichols A-D, 4α-hydroxybromocuparene, known 9 related compds; ma'ilione, ma'iliohydrin, isorigidol, *allo-isoobtusol*, majusculone, (3(15)*Z*)-10,15-dibromochamigra-1,3(15),7(14)-trien-9-ol, (3(15)*E*)-10,15-dibromochamigra-1,3(15),7(14)-trien-9-ol, (3(15)*Z*)-15-bromochamigra-1,3(15),7-trien-9-one, (3(15)*E*)-15-bromochamigra-1,3(15),7-trien-9-one)

(Continue to 1270-2)

1270-2 (Sesquiterpene) *allo*-Isoobtusol; Cartilagineol

## References and Notes

(Continue from 1270-1)

(5) **From the sea hare**; Wessels, M., König, G. M., and Wright, A. D. 2000. *J. Nat. Prod.*, **63**, 920-928. New natural product isolation and comparison of the secondary metabolite content of three distinct samples of the sea hare *Aplysia dactylomela* from Tenerife. (together with dactylopyranoid, isopinnotol B, dactylomelol, furocaespitane, puertitol B acetate, caespitenone, 8-acetylcaespitol, caespitol, caespitane, laucapyranoid A, obtusol, [cartilagineol \(\*allo\*-\*isobtusol\*\)](#), 9-isobutuosol, 9-acetylisobtusol, elatol, 9,15-dibromo-chamigra-1,3(15)-dien-11-ol)