

DYSOXYLONENE*

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The volatile wood-oil of *Dysoxylon fraserianum* Benth. ("rosewood") was first examined by Penfold (1927) who found it to consist predominantly of sesquiterpenes. Two oils distilled from trees from the Chillingham district, N.S.W., were found to contain a large proportion of a fraction yielding crystalline dihydrochlorides, m.p. 118–119 °C, $[\alpha]_D^{20} +41.1$ and -43.65° . However, an oil from the Comboyne district was characterized by giving an optically-inactive dihydrochloride, m.p. 108–109 °C. The optically-inactive cadinene-type sesquiterpene regenerated from this derivative had b_{10} 136–137 °C; d_{15}^{15} 0.9236; n_D^{20} 1.5063, and was named "dysoxylonene".

We have examined a freshly-distilled oil of this species from Comboyne and also obtained an optically-inactive white crystalline dihydrochloride, but of m.p. 105–106 °C (Found: C, 64.7; H, 9.5; Cl, 25.8%. Calc. for $C_{15}H_{26}Cl_2$: C, 65.0; H, 9.4; Cl, 25.6%). Digestion with glacial acetic acid and sodium acetate on the steam-bath resulted in the formation of an optically-inactive sesquiterpene, b_{10} 135–136 °C; d_{15}^{15} 0.9247; n_D^{20} 1.5069. The infra-red spectrum of the dysoxylonene dihydrochloride was found to be identical with that of the dihydrochloride, m.p. 119 °C, prepared from a (+)-cadinene from the volatile leaf-oil of *Eucalyptus maculata* Hook.

Kafuku, Ikeda, and Hata (1935) isolated from *Lantana camara* L. a cadinene-like sesquiterpene, micranene, yielding a dihydrochloride, m.p. 105.5–106.5 °C, and which was shown by Sebe (1940) to be (\pm)-cadinene. Hence, both micranene and dysoxylonene are optically-inactive cadinenes, and the use of these trivial names should be discontinued.

References

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