EXPERIMENTAL

Isolation of sucrose octa-acetate. Dried chips of Radix Clematidis (1·0 kg) were percolated with 3 l. 95% EtOH. The EtOH extract, after evaporation to dryness was exhaustively extracted in a Soxhlet with Et_2O. The residue from the ether crystallized from petrol. After 2 further recrystallization from ether, it was obtained as colorless needles, mp 84–86°, with $[\alpha]_D$ + 62° (*c* 1·0 in $CHCl_3$). The m.p. was unchanged by admixture of an authentic sample of sucrose octa-acetate. TLC (Si gel G); R_f 0·83 (CH_2Cl_2:C_6H_6 = 1:1). Elem. Anal., Found: C, 49·41; H, 5·82. Calc. for $C_{28}H_{38}O_{19}$: C, 49·56; H, 5·69%. ν_{max}^{KBr} 1740, 1250 (broad); 3480 cm^{-1} (overtone) [–OCOMe]. $\delta_{TMS}^{CDCl_3}$ 2·00 (3H), 2·04 (3H), 2·01 (15H), 2·18 (3H) [–OCOC<u>H</u>$_3$], 4·10–4·40 (6H), 4·72–5·76 (5H) [–C<u>H</u>–OCOMe]. Mass, *m/e*; 331, 229, 271, 211, 169, 109.

Identification of sucrose octa-acetate. Dried roots of (*C. chinensis* or *C. apiifolia*) were exhaustively extracted by Soxhlet with Et_2O. The ethereal solution was evaporated to dryness. The residue was chromatographed on a thin or thick-layer Si gel G plate in CH_2Cl_2–C_6H_6 (1:1). The component isolated from the thick-layer plate (R_f 0·75–0·85) was a crystalline solid, which was assigned as sucrose octa-acetate on the basis of the R_f value, mp, IR and NMR spectra.

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THE IDENTIFICATION OF LENZITIN AS OOSPONOL*

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Key Word Index—*Gloeophyllum sepiarium*; *Oospora astringenes*; fungi; lenzitin; oosponol; antibiotic; antifungal activity.

Lenzitin, an antibiotic which from a basidiomycete *Gloeophyllum sepiarium* (Wulf. ex Fr.) Karst [1] but has never been examined chemically to date. We now present evidence which shows that it is identical with oosponol (4-ω-hydroxyacetyl-8-hydroxy isocoumarin), a metabolite from *Oospora astringenes* Yamamoto [2–5].

Lenzitin, thin yellow needles of mp 172°, analysed for $C_{11}H_8O_5$, showed IR absorptions at 3470 cm^{-1} (OH), 2500–3200 cm^{-1} (chelated OH), 1710 cm^{-1} (free C=O), 1690 cm^{-1} (chelated C=O of lactone), 1625 and 1568 cm^{-1} (isocoumarin). Its UV spectrum exhibited λ_{max} 215 nm (log ε 4·45), 256 nm (4·04), 333 nm (3·84) with an inflexion at 233 nm. The MS gave peaks of M^+ 220, *m/e* 202, 189, 161, 144, 105, 77, 63, 51. NMR in $CDCl_3$ (100 M Hz) showed signals at 1·56 δ (1H, *b s*, alcoholic OH), 4·63 δ (2H, *d*, *J* 5 Hz, CH_2 adjacent to C=O), 7·85 δ (1H, *s*, C-3), 7·08 δ (1H, *d*, *J* 8 Hz, C-7), 7·69 δ (1H, *t*, *J* 8 Hz, C-6), 8·04 δ (1H, *d*, *J* 8 Hz, C-5). Catalytic hydrogenation caused a shift of λ_{max} to 230, 245 and 311 nm indicating that the hydrogenated product has a dihydroisocoumarin nucleus. The mono-*p*-nitrophenylhydrazone, orange cubes mp 210·5°, showed CO absorption at 1690 cm^{-1} rather than 1710 cm^{-1} in the IR.

The above spectroscopic and chemical data suggested that lenzitin was oosponol. This was confirmed by direct comparison of IR and NMR spectra of the two compounds and a mp determination.

Biological significance. The antibiotic activity of lenzitin or oosponol against Gram-positive and Gram-negative bacteria is reportedly not very strong [1,2]. Now we found that it possesses strong antifungal activity. It inhibited the growth of *Candida albicans*, *Aspergillus fumigatus* and *Trichophyton asteroides* at the concentration respectively of 1·56, 1·56 and 3·12 μg/ml, as measured by liquid dilution method.

EXPERIMENTAL

The IR spectrum was measured in KBr discs, and the UV spectrum in EtOH.

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