Spectroscopy. NMR spectra were determined at 60 MHz, in CCl_4 and with trimethylsilane as internal standard; values are given in ppm (δ) relative to trimethylsilane.

Catalytic hydrogenation of the norcapillene. Catalytic hydrogenation of the norcapillene (55 mg) in EtOH (5 ml) over PtO_2 (1·5 mg) was carried out at room temp. for 2·5 hr. The product was purified by preparative TLC (kieselgel GF254) using *n*-hexane C_6H_6 (2:1), as was obtained as a colorless oil. NMR: $\delta^{CCl_4}_{ppm}$ 0·88 (3H, *t*, CH_2–$\underline{CH_3}$), 1·26 (6H, *m*, –($\underline{CH_2}$)$_3$–), 2·68 (2H, *t*, ϕ-$\underline{CH_2}$–), 7·23 (5H, *m*, ϕ–). (Found: C, 89·11%; H, 10·89%. Calcd for $C_{11}H_{16}$: C, 89·12%; H, 10·88%).

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NORSEYCHELANONE, α- AND β-PATCHOULENES AND PATCHOULI ALCOHOL FROM *NARDOSTACHYS JATAMANSI*

G. RÜCKER*, J. TAUTGES*, M. L. MAHESWARI† and D. B. SAXENA†

* Institut für Pharmazeutische Chemie der Westfälischen Wilhelms-Universität Münster, BRD; †Division of Agricultural Chemicals, Indian Agricultural Research Institute, New Delhi 110012, India

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Key Word Index—*Nardostachys jatamansi*; Valerianaceae; norseychelanone; α- and β-patchoulenes; patchouli alcohol.

Plant Nardostachys jatamansi DC, Valerianaceae. *Origin*: India, from the Himalaya mountains at a height of 3000–5000 m. The plant purchased from the local market. *Previous work* on the roots [1–3].

Isolation 24 kg air-dried roots are exhaustively extracted with light petrol (35–40°). Solvent was evaporated *in vacuo* and the residue (900g) extracted with Na_2CO_3-solution. The insoluble portion was chromatographed on a silica gel column (180 × 2·0 cm) using light petroleum (60°)–EtOAc, 8:2 as eluent. The fraction with R_f 0·78 (TLC same solvent) was found to be norseychelanone isolated for the first time from any plant source. The fraction R_f 0·70, formed colourless crystals mp 55–56° (patchouli alcohol). The fractions having R_f 0·90–1·0 were rechromatographed on silica gel columns impregnated with 10% $AgNO_3$, using hexane as an eluent. TLC showed spots at R_f 0·5, 0·60, 0·68 and 0·80. The bright red spot (R_f 0·45) was identified as seychellen [4,5], confirmed by IR, NMR and MS.

Identification Norseychelanone: Identical with the compound obtained by degradation of seychellen, TLC, IR, NMR. MS [4.5]. *Patchouli alcohol*: IR [6–9], MS [7–9], TLC (Kieselgel Merck PF_{254}), Anisaldehyde–H_2SO_4: carmine red, R_f: 0·70. *α- and β-Patchoulenes*: by GC–MS (Varian-CH7), 3·8% SE 30, 100°C/6° 2 min to 250°. The GLC of the mixture showed 4 peaks having R_t: 5,3/9,15/10, 0 and 11, 0 min. For further identification by GLC 50% reference substances were added to the mixture. β-Patchoulene showed an increase in the height of the peak with R_t 9,15 min. MS: *m/e*(%) 204(60M^+), 189(98), 161(100), 156(30), 135(30), 133(40), 119(70), 105(60), 93(50), 91(50), 79(30), 77(25). α-Patchoulene showed an increase in the height of the peak R_t 11·0 min. MS: *m/e*(%) 204(20M^+), 189(20), 161(30), 135(80), 119(45), 108(50), 107(90), 105(55), 93(100), 91(50), 81(20), 79(30), 77(30), 55(50).

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