temperature for 2 h and then poured into water (60 ml). The solid material was removed in a centrifuge. The solution was evaporated almost to dryness, mixed with methanol–water (1:1, 50 ml) and solid carbon dioxide was added. The residue that appeared was filtered off and the filtrate evaporated to dryness to yield a solid material (0.5 g) which was difficult to crystallize. The NMR spectra of this compound and its triacetate were identical with the corresponding spectra of the alditol *1* and its triacetate, respectively.

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N-Vinyl as N–H Protecting Group. A Convenient Synthesis of Myosmine

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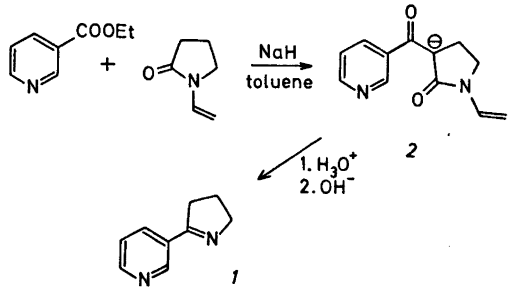
We here describe a convenient synthesis of the minor tobacco alkaloid myosmine (*1*), starting with a condensation of *N*-vinylpyrrolidone with ethyl nicotinate. The condensation product 2 is treated with boiling concentrated hydrochloric acid without prior purification and, after extraction of bases and distillation, *1* is obtained in a 63 % yield.

This synthesis of myosmine is similar to previous ones in which the N–H group in 2-pyrrolidone was protected as an *N*-acyl [1] or *N*-trimethylsilyl [2] derivative, but preparation of



the N–H protected pyrrolidone is here avoided by using the commercially available *N*-vinylpyrrolidone. Reports on the use of vinylic groups as protective groups for N–H are scanty. 2-Acyl-1-methylvinyl groups have for instance found application in peptide syntheses.[3]

Experimental. A solution of freshly distilled *N*-vinylpyrrolidone (Fluka) (20 g, 0.18 mol) and ethyl nicotinate (25.0 g, 0.17 mol) in dry toluene (200 ml) was added to a stirred suspension of sodium hydride (0.26 mol, introduced as 10.4 g of a 60 % suspension in mineral oil) in dry toluene (100 ml). The mixture was then refluxed for 1.5 h. A light green precipitate was formed at the beginning of the heating. The cooled reaction mixture was poured under stirring into dilute hydrochloric acid (100 ml of conc. acid + 180 ml of water). After 5 min the pH was adjusted to 4 with concentrated sodium hydroxide solution, the toluene layer was separated, and the aqueous layer was extracted with chloroform-ethanol (3:2, 3 × 200 ml). The organic layers were combined and dried (Na_2SO_4), and the solvent was evaporated giving a residue which was treated with refluxing concentrated hydrochloric acid (250 ml, 14 h). The tar formed was discarded and the remaining solution was made alkaline (pH 10) with concentrated sodium hydroxide solution and then extracted with chloroform (3 × 150 ml). After drying (Na_2SO_4), concentration and distillation, *1* was obtained as a pale yellow liquid (15.1 g, 63 %), b.p. 113–115 °C (0.4 kPa), which solidified in the receiver, m.p. 39–42 °C. These values, as well as the IR absorption max at 1618 cm^{-1} (film), agree well with those previously given for myosmine.[1]

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