

THE REACTION OF ENAMINES WITH PYRROLE

Otohiko Tsuge, Masashi Tashiro, and Yoko Kiryu

Research Institute of Industrial Science, Kyushu University,

Hakozaki, Higashi-ku, Fukuoka 812

The reaction of 1-pyrrolidinyl-1-butene (1a), -propene (1b), and -cyclohexene (1c) with pyrrole was investigated under various conditions. In rather mild conditions (60 - 80°C, 5 min), the corresponding N-(1-(1'-pyrrolidinyl)alkyl)pyrroles, whose structures correspond to the Michael type adducts of enamines (1) and the nitrogen atom of pyrrole, were obtained. Under forcing conditions, however, 2-(1-(1'-pyrrolidinyl)alkyl)pyrroles from 1a and 1b, and mono- and dicyclohexenylpyrroles from 1c, were formed, together with 2,3-dihydro-3H-pyrrolizine compounds from all enamines. The reaction mechanisms for the formation of products are discussed.