Reaktionsbeteiligung elektrophiler Funktionen bei der Dehydrierung 4-substituierter Piperidine

Participation of Electrophilic Groups with the Dehydrogenation of 4-Substituted Piperidines

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Dehydrogenation of 2-(1-piperidinyl)-benzaldehydes **1–3** using mercury(II)-EDTA generated the lactams **4–6**, indicating a reversible reaction of a carbinolamine intermediate with the formyl group. The yields and oxidation rates decreased by 4-substitution in the piperidine moiety.

The 2-(1-piperidinyl)-acetophenones **11**, **16–19** showed a similar behavior with mercury(II)-EDTA but gave rise to a product pattern. The *trans*-benzoquinolizidones **12**, **20**, **23**, **26**, **29** resulted from the cyclic iminium compounds reacting with the acetyl group as nucleophile. By another oxidation these species were partially transformed to the quinolinones **13**, **21**, **24**, **27**, **30**. An intermediate electrophilic neighboring of the carbonyl group with the cyclic hemiaminals led finally to the lactams **14**, **22**, **25**, **28**, **31**. Mechanisms for the reactions are proposed.