

# Reaktionen vinyloger Hydrazide mit Carbiminium-Verbindungen

Reactions of Vinylogous Hydrazides with Carbiminium Compounds

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Vinylogous hydrazides of type **1** react with methyleniminium salts only in 2-position to form aminomethylated compounds **2**·HX. The oxidation of **1** with Hg(II)-EDTA results in a twofold dehydrogenation to the lactams **3**, which may be aminomethylated in 2-position. The methylpiperidine derivatives **4** and **5** with Hg(II)-EDTA yield in a monodehydrogenation cyclic iminium compounds. These are isolated as **6**·ClO<sub>4</sub> and **7**·ClO<sub>4</sub> respectively, and show an enolimine structure, which is not accessible to intramolecular aminoalkylation. With the 2-methylsubstituted enhydrazinones **11** methyleniminium salts cause an attack at 4-position, vinylogous to the carbonyl function, and produce the aminomethylated derivatives **13**. Oxidation of **11** gives rise to the lactams **12**, which are inert to Mannich reagents. The Mannich bases **2** undergo an amine elimination to form the pyrazolinium betaines **15**. The aminomethylated lactams **20** show, in addition to amine eliminations, retro Mannich reactions and from the cleavage products methylenebis(lactam-enhydrazinones) **21** result. Formaldehyde and primary amines generate with **1** and **3** the tetrahydropyrimidine derivatives **24/25** and **22/23**, respectively. Hexahydroacridinediones **27** are obtained from the reaction of **21** with formaldehyde and acetic acid.

*Key words:* C-Aminomethylation, Mercury-EDTA Dehydrogenation, Carbinolamine-Iminium Equilibrium