Chinazolinenderivate durch Cyclodehydrierung von
N-(2-substituierten Aryl)-Piperidinen

Quinazoline Derivatives by Cyclodehydrogenation of
N-(2-Substituted Aryl)-Piperidines

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Amide, Oxime, Nitrone, Neighboring Group Participation, Mercury(II)-EDTA

Dehydrogenation

Dehydrogenation of the N-[2-(aminocarbonyl)phenyl]piperidines 1–5 using Hg(II)-EDTA, generated the quinazolinones 6–9. Increasing size of the 4-substituent in the piperidine decreased the oxidation rate and the product yield.

N-[2-(Hydroxyiminomethyl)phenyl]piperidines 18–22 showed a different behaviour. While 18 with Hg(II)-EDTA in water produced the oxime lactam 24 in quantitative yield, the 4-substituted piperidines 19–21 caused not only a lower reaction rate but also an altered product pattern. The double dehydrogenation to lactams was reduced and the cyclic nitrone, formed by two electron withdrawal, became dominant. From the spiro compounds 21 and 22, solely the quinazoline-N-oxides 29 and 30 resulted. The mechanism of the reactions is discussed.