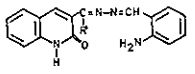
Corresponding both 3-benzoyl- and 3-formyl-1-H-quinoline-2--ones (4e) and (4i) are also formed, however, they undergo condensation with o-aminobenzaldehyde to give azines (9e) and (9i), respectively.



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LE I 22

REACTION WITH AROYLIMIDODITHIOCARBONATE

M. Richter and M. Augustin

Department of Chemistry, Martin-Luther-University of Halle-Wittenberg, GDR

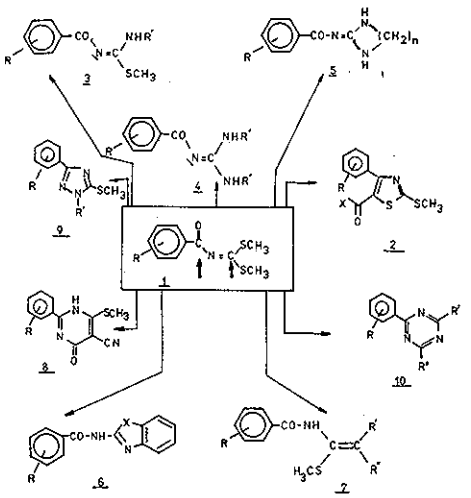
Abstract — This paper is dealing with the reaction between aroyl-aminodithiocarbamates and alkylating reagents forming aroyl-imidodithiomethylcarbonate **1** and -thiazoles.
The reactivity of these compounds have been investigated.

Reaction of **1** with nucleophilic compounds gives new possibilities of synthesizing heterocycles.

With ammonia, aliphatic and aromatic amines **1** yields subst. isothioureas and subst. guanidines. ^{1}H-NMR spectra of these compounds are interpreted as to their E/Z isomerism and their imine-enamine tautomerism. Reaction of **1** with diamines and aromatic amines, respectively, which still have a nucleophilic substituent in ortho-position next to the amino group leads to the heterocycles. The reaction **1** with CH-acid compounds leads to acylthioamides, with cyanacetamide to the pyrimidone, and with hydrazines, guanidines or thioamides to the heterocycles 1,2,4-thiazole and 1,3,5-triozines.

The mass-, IR- and ^{1}H-NMR spectra of the synthesized compounds are discussed.

Schema



LE II 1

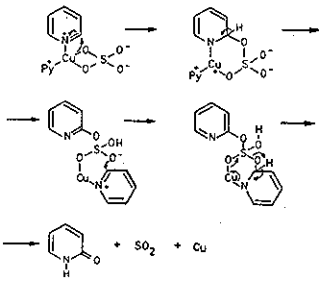
THE OXIDATION OF PYRIDINES WITH COPPER SULFATE

Rudolf A. Abramovitch, Piotr Tomasik* and Adam Woszczyk

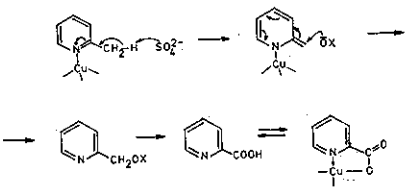
Department of Chemistry and Geology, Clemson University, Clemson, S.C. 29631, USA.

Department of Organic Chemistry, Pedagogical University, 42-201 Częstochowa, Poland.

Oxidation of pyridine, 3-picoline, 3,5-lutidine, quinoline, isoquinoline and acridine with hydrated copper sulfate gives the corresponding pyridones probably via the intramolecular reaction of a base — Cu (II) complex:



The homologues of pyridine bearing the methyl groups in the α- and γ- positions undergo demethylation. The reaction goes via the aldehyde and carboxylic acid formation. Picolinic acid could be isolated after oxidation of 2-picoline owing to the formation of a relatively stable copper chelate. Also 1,2-bis (3-methyl-4-pyridyl)ethylene is formed with a low yield from 3,4-lutidine. Oxidation of the α- and γ- methyl groups may be taking place via the hydrogen — abstraction from the side--chain.



The unusual oxidation of not only the α- but also the β-carbon atom in 2- and 4- ethylpyridines has been discovered. Apart from pyridine also 2- and 4-picolines are formed. As far as we are aware this is the only example known of such an oxidation at the terminal atom of a side chain, containing more than one carbon atom. A radical process seems likely to be involved in this case.

LE II 2

NEW REARRANGEMENTS OF N-CONTAINING RINGS

A. N. Kost, R. D. Sagitulin

Department of Chemistry, Moscow State University, Moscow 117234, USSR