DEBENZYLATION OF N-BENZYLAZOLES

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In the reaction of 1-benzyl-3,5-dimethylpyrazole with butyl- and naphthyllithium, 1-(α-lithiobenzyl)-3,5-dimethylpyrazole is formed in good yield in the first case, while debenzylation occurs just as smoothly in the second. Inasmuch as 1-(α-lithiobenzyl)-3,5-dimethylpyrazole is not converted to 3,5-dimethylpyrazole by the action of naphthyllithium, it can be concluded that metallation at the N$-$CH$_2$ group is not the first step in the debenzylation reaction. Phenyl(1-benzyl-2-imidazolyl)carbinol, phenyl(1-benzyl-2-benzimidazolyl)carbinol, and 2-(α-aminobenzyl)-1-benzylbenzimidazole undergo debenzylation under similar conditions. The debenzylation of phenyl(1-benzyl-2-benzimidazolyl)carbinol by our method gives better yields than when sodium in liquid ammonia is used.

In the reaction of naphthyllithium with N-benzylhaloazoles the reaction may lead to the corresponding debenzylated organolithium compounds. Thus, for example, from 2-iodo-1-benzylbenzimidazole we obtained 1,2-dilithiobenzimidazole, the structure of which was proved by conversion to phenyl(2-benzimidazolyl)carbinol. All of the reactions with naphthyllithium were carried out in tetrahydrofuran.

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