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The Reaction of Phenylpentazole with *n*-Butyl Lithium. Synthesis of 1,1-Di-*n*-butyl-2-phenylhydrazine

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The reaction of phenylpentazole, C_6H_5–*cyclo*-N_5, with *n*-butyl lithium in tetrahydrofuran or in diethylether does not yield a lithium pentazolide such as $Li(THF)_4^+N_5^-$. Instead, a mixture of several primary products is obtained, which probably include lithium 1-*n*-butyl-5-phenyl-pentaazadienide, $Li^+[n\text{-}C_4H_9-N{=}N-N{=}N-C_6H_5]^-$ and di-*n*-butyl-phenylhydrazide, $Li^+[(n\text{-}C_4H_9)_2N-N-C_6H_5]^-$. After hydrolysis 1,1-di-*n*- butyl-2-phenylhydrazine, $(n\text{-}C_4H_9)_2N-NH-C_6H_5$, is ob- tained with good yield. This compound is an oil that was characterized by NMR, mass and IR spectroscopy.

Key words: Phenylpentazole, 1,1-Di-*n*-butyl-2-phenylhydrazine