**2-Amino-1-phenylimidazole hydrochloride.** Obtained from 1-phenyl-2-sodioimidazole. Mp 206-206.5° C. Yield 43.5%. Found, %: C 55.23; H 4.75; Cl 18.20; N 21.80. Calculated for $C_9H_9N_3 \cdot HCl$, %: C 55.25; H 5.16; Cl 18.11; N 21.43.

**2-Amino-1-phenylimidazole.** Mp 125-126° C (from hexane). Found, %: C 67.70; H 5.83; N 26.45. Calculated for $C_9H_9N_3$, %: C 67.90; H 5.69; N 26.40.

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## CYCLOHYDRAZINOCYANATION OF 2,2'-METHYLENE-BIS-CYCLOHEXANONE

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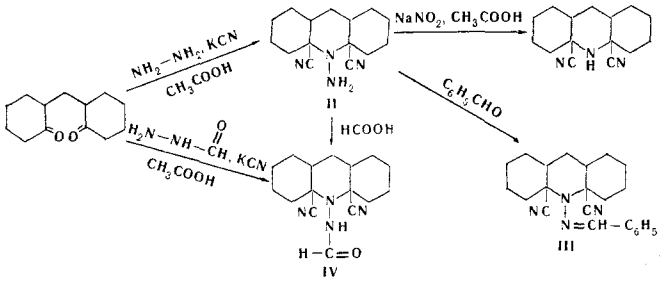
With 2,2'-methylene-bis-cyclohexanone (I) as an example, we have established that 1,5-diketones of this type are capable of undergoing a cyclohydrazinocyanation reaction analogous to the cycloaminocyanation reaction [1]. The reaction takes place exceptionally readily when the given ketone is mixed with KCN and hydrazine in dilute acetic acid; this gives a 90% yield of N-amino-11,14-dicyanoperhydroacridine (**II**). 1,5-Diketones of the aliphatic series have previously been subjected to reaction with hydrazine and hydrocyanic acid, but only in an aqueous medium, which gives the corresponding N-amino-2,6-dicyanopiperidines in low yields [2,3].




On reaction with benzaldehyde in propanol with the addition of acetic acid anhydride, II forms the N-benzylidene derivative **III**. The structure of II is shown definitively by the fact that on treatment with sodium nitrite in acetic acid it undergoes deamination and is converted into the known 11,14-dicyanoperhydroacridine [1].

On being boiled with 85% HCOOH, II gives the N-formyl derivative **IV**. The same compound is also formed by the reaction of I, KCN, and formhydrazide in dilute acetic acid.

**II.** Colorless crystals, mp 210-211° C (benzene-dioxane 1:2). Found, %: C 69.55; H 8.76; N 21.45. Calculated for $C_{15}H_{22}N_4$, %: C 69.77; H 8.53; N 21.70. IR spectrum (in $CCl_4$), $cm^{-1}$: 3380 (NH), 2220 (C≡N). **III.** Light yellow crystals, mp 225-228° C (ethanol). Found, %: C 76.22; H 7.69; N 16.31. Calculated for $C_{22}H_{26}N_4$, %: C 76.30; H 7.51; N 16.18. **IV.** Colorless crystals, mp 206-208° C (from 40% ethanol). Found, %: C 67.29; H 8.12; N 19.87. Calculated for $C_{16}H_{22}N_4$, %: C 67.13; H 7.69; N 19.58. IR spectrum (in KBr), $cm^{-1}$: 1690 (amide C=O), 2230 (C≡N).

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