

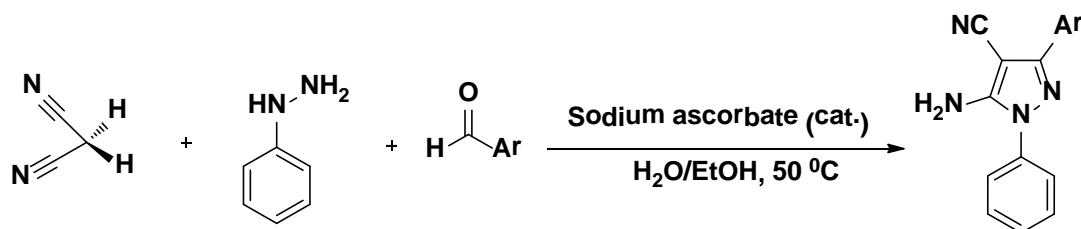
## Three-Component Reaction of Malononitrile with Phenyl hydrazine and Aryl Aldehydes Promoted by Sodium Ascorbate

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Among the *N,N*-containing heterocycles, aminopyrazoles are increasingly being exploited as multipurpose building blocks in organic synthesis and medicinal chemistry. The pyrazole ring is a very significant drug-like framework that is present in numerous pharmacologically active molecules and natural products. These compounds often exhibit anti-inflammatory, analgesic, antitumor, antiviral, herbicidal, fungicidal, bactericidal, and antipyretic activities [1-2]. Thus, various methods for the syntheses of pyrazole derivatives have been reported in the recent years [3-6]. In this work, after optimization of the reaction conditions, a series of 5-amino-3-aryl-1-phenyl-1*H*-pyrazole-4-carbonitriles were synthesized in excellent yields in the presence of sodium ascorbate as the catalyst. The reaction was conducted in a mixture of water and ethanol at 50°C. The remarkable aspects of this approach are short reaction times, simple work-up procedure, mild reaction conditions, the ready availability of the catalyst, and minimal environmental pollution.



### References

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