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# Solvent-free, one-pot synthesis of 2,4,6-Triarylpyridines using trichloroisocyanuric acid or N-Bromosuccinimide as a novel and neutral catalyst

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**Background and Aims:** 2,4,6-Triarylpyridines known as Krohnke pyridines are considered as antimalarial, anticonvulsant, anesthetic, antiinflammatorial, antioxidant, antibacterial, and antiparasitic agents. In this study, a simple and benign protocol has been explored for the preparation of 2,4,6-triarylpyridines by a one-pot reaction between aryl aldehydes, enolizable ketones and ammonium acetate in the presence of N-bromosuccinimide or trichloroisocyanuric acid as green and neutral catalysts.
**Methods:** Herein, we describe a practical and simple method to prepare 2,4,6-triarylpyridines by a three component condensation of aromatic ketones or aldehydes with ammonium acetate under solvent-free conditions at 130 °C using N-bromosuccinimide (NBS) or trichloroisocyanuric acid (TCCA) as catalysts.
**Results:** In our ongoing research on the use of NBS in various transformations, it was found to efficiently catalyze the one-pot synthesis of 2,4,6-triarylpyridines from aldehydes and ketones. We compared results of NBS with TCCA in the synthesis of 2,4,6-triarylpyridines. NBS can act as an effective catalyst for the mentioned transformation.
**Conclusions:** In conclusion, we have developed an efficient and benign procedure for the synthesis of 2,4,6-triarylpyridines.This protocol may be considered as environmentally friendly since no solvent has been necessarily used in these reactions and the catalysts employed are regarded as non-polluting reagents.

**Keywords:** 2,4,6-Triarylpyridines; Antioxidant; N-Bromosuccinimide; Trichloroisocyanuric acid; Green chemistry.