



## “Bromination of Acetophenone using *N*-Bromosuccinimide”

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**Abstract:** Acetophenone react with *N*-bromosuccinimide and *p*-toluenesulphonic acid (*p*-TsOH) using acetonitrile as a solvent to yield  $\alpha$ -bromoacetophenone in high yields.

The reaction does not take place in the absence of *p*-

TsOH. However, the reaction is possible photochemically even in the absence of *p*-TsOH.



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**Introduction:** The  $\alpha$ -bromination of carbonyl compounds is an important transformation in synthetic organic chemistry. The  $\alpha$ -Bromination of the side chain of aromatic ketones has attracted attention because the resulting bromoketones are intermediates for the synthesis of a variety of biologically active compounds.  $\alpha$ -Bromination is the first step of introducing a heteroatom so as to provide additional conjugation to the carbonyl group, and for generating stabilized carbon radicals or carbanions. The reported work on bromination of acetophenones makes the use of bromine and HBr which have several environmental problems. Handling of liquid bromine, due to its hazardous nature is troublesome. In order to overcome these problems, alternative methods avoiding the use of liquid bromine has been developed.

Most recent developments in this area emphasize the advantageous use of NBS over Br<sub>2</sub> under suitable conditions making NBS as a reagent of choice for the following reasons- (i) ease of handling (ii) selectivity of the reaction in appropriate condition (iii) yields of the products (iv) from stand point of green chemistry (v) efficiency of the reaction. As a part of our ongoing programme aimed at the selective bromination of various compounds, we now investigated the bromination of acetophenone using NBS. Consequently, we report herein synthesis of  $\alpha$ -bromo derivative of acetophenone.

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