



A new and effective method for preparation of alprazolam

Farajollah Mohanazadeh

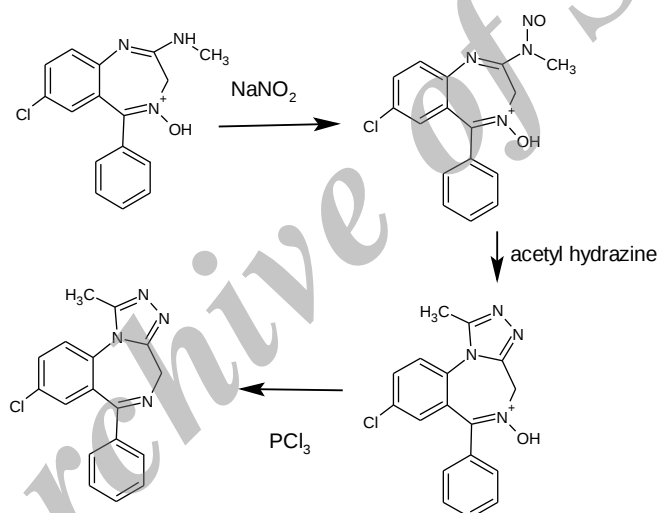
Department of Organic Chemical and Medicinal, Institute of Chemical Technologies, Iranian Research Organization for Science & Technology, Iran

E-mail: mohannazadeh@irost.org

Benzodiazepines are known as drugs affecting the central nervous system [1, 2]. Alprazolam is one of the newest and most effective drugs in this family. [3].

Conventional Methods for preparing this compound include the use of toxic substances such as pyridine and P_2S_5 [4].

In this study, a new method for the preparation of alprazolam from chlordiazepoxide has been developed. Chlordiazepoxide is cheap and available in the industrial scale. Alprazolam was prepared in three steps. Reaction conditions were optimized for each stage. Chlordiazepoxide was converted to its nitroso derivative by sodium nitrite. Alprazolam oxide was obtained by reaction of nitroso compound with acetyl hydrazine. In a deoxygenation reaction by phosphorus trichloride alprazolam oxide was converted to alprazolam. This compound was tested on USP 31. It passed all of the tests.



References

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