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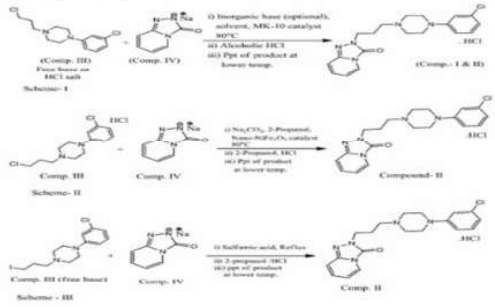
(57) Abstract :
The current invention describes a more efficient protocol for producing virtually pure Trazodone (TZ) and its hydrochloride salt (TZS). The procedure consists of reacting the compound-II (as stated) with the compound-III (as mentioned), optionally in the presence of an inorganic base and a green catalyst such as Montmorillonite K10 clay (MK-10), nano-nickel ferrites (Nano-NiFe2O3), Sulfamic acid (SA) and isolating the TZ free base and/or its TZS by precipitation at a lower temperature. The improved protocol for preparing TZ (Compound- I) results in a product with a total quantity of alkylating compounds (as defined herein) as impurity of less than 10 ppm. The improved technique for preparing TZ (Compound- I) results in a product containing less than 2.5 ppm of l-(3-chlorophenyl)-4-(3-chloropropyl)-piperazine as an impurity. The main benefits of the current process are its superior selectivity, greater isolated quantities of the products, use of mild catalyst, economically efficient and recyclability.



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