

The present invention relates to a novel process for the synthesis of 5-methoxy-2-[[[4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]-1H-benzimidazole, known under the generic name omeprazole. Moreover, the present invention also relates to manufacture of a pharmaceutical preparation thereof and its use in medicine. The novel process for the preparation of omeprazole, comprises the step of oxidizing 5-methoxy-2- [[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]thio]-1H-benzimidazole in an organic solvent with an oxidizing agent in the presence of a titanium complex and optionally in the presence of a base.