INTRODUCTION

The acetics (cyclic or acyclic) are prepared by using a variety of catalyst such as p-toluenesulphonic acid (TsOH), Me3SiCl, TBAF, etc. which requires longer reaction times (1-16 hours), low yield and tedious work up, but they occupy a special place in the realm of natural and synthetic organic chemistry owing to their useful and diverse biological activities as molluskicidal, antihelminthic, hypnotic, insecticidal, anticoagulant properties, and fluorescent brighteners. Further, the organic reaction under microwaves give good yield in a few minutes along with product purity and safety.

We now report the cyclisation reaction in between warfarin and methanol in presence of Mont. KSF as catalyst under microwave ir-radiation give corresponding warfarin acetals in a few minutes (scheme-1). The product is crystallized by methanol give 92% yield. The product was identified on the basis of 1H-NMR, IR and by comparison of their Rf values with those of authentic samples prepared by standard routes.

Conclusion

We have investigated that warfarin acetals can be prepared more quickly in high yield in shorter reaction time in presence of Mont. KSF catalyst under microwave i-radiation.

EXPERIMENTAL

In a typical procedure, Warfarin (1 mmole), methanol (5ml) and Mont. KSF catalyst(500 mg) was irradiated for 5 minutes at 70% power level.
(560 W) in an unmodified domestic microwave oven operating at 2450 MHz. The product was extracted with methanol (2X15ml). The crude product was purified by crystallization from methanol. Colour: white; Melting point: 166°C; 1H-NMR (δ in ppm in CDCl₃): 1.47(3H, s, CH₃), 2.25-2.32(2H, C-3), 3.17(3H, s.OCH₃), 4.15(H, dd, C-10) and IR (KBr, cm⁻¹): 1708, 1625, 1611, 1493, 1380, 1140, 1100 1050, 730 and 690 cm⁻¹.

ACKNOWLEDGEMENT

We thank Dr. R. Sharma (Dayton) for gifts of Mont. KSF clay.

REFERENCES

(9) (a) Perreux,L, Loupy. A, Tetrahedron, 57, 9199(2001);