CYCLIZATION OF SOME HETEROCYCLIC DIALDEHYDES WITH NITROMETHANE

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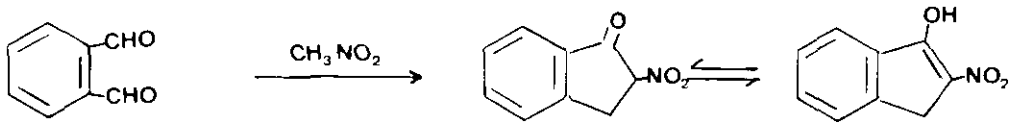
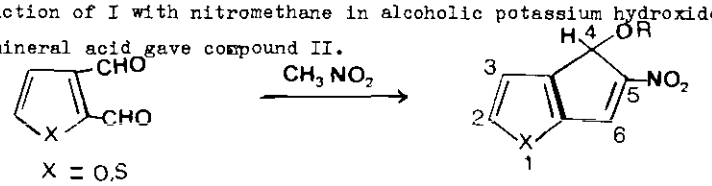
In extension to our interest of the reactions of five membered heterocyclic o-dialdehydes[1-5], this report describes the cyclization of o-furandicarboxaldehyde and o-thiophenedicarboxaldehyde with nitromethane.

The reaction of o-phthaldehyde with nitromethane in basic medium was studied by many authors[6-8], and they found that the obtained product was not uniform, and they ascribed this to its being a tautomeric mixture.



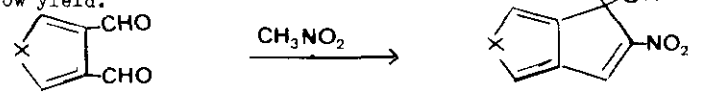
Firstly, the reaction of I with nitromethane in alcoholic potassium hydroxide and after acidification with mineral acid gave compound II.



X = O,S

I II

Secondly, the reaction of III with nitromethane at the same experimental conditions gave compound IV in low yield.



X = O, S

III IV

The structure of the synthesised compounds were fully identified by deuterium labelling, correct analytical data as well as spectral studies by i.r, ^1H n.m.r, and mass spectra.

References

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