Synthesis of sulphonyl-and sulphonamide derivatives of naphth [1,2-d] oxazoles

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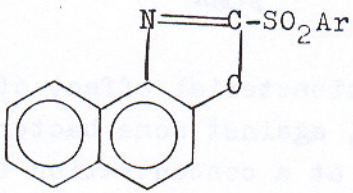
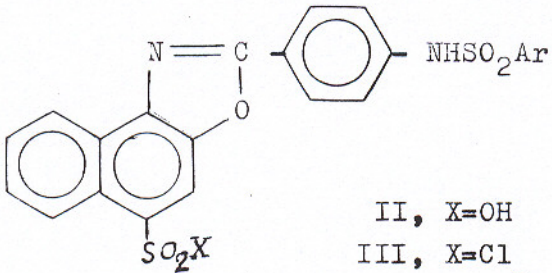
In an endeavour to synthesize some new naphthoxazoles derivatives, the parent naphth (1,2-d)oxazole was allowed to interact with different arylsulphonyl chlorides giving the expected sulphones (I)



I

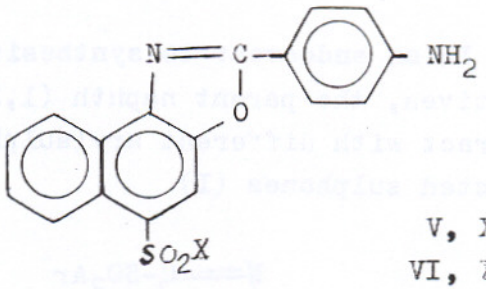
Also, 2-(p-aminophenyl)naphth (1,2-d)oxazole-5-sulphonic acid was condensed with arylsulphonyl chlorides to give the corresponding sulphonamide derivatives (II)



II, X=OH
III, X=Cl
IV, X=N

II was converted to the corresponding sulphonyl chloride (III) via treatment with thionyl chloride which in turn condensed with some secondary amines giving the expected sulphanilamide compounds (IV).

IV was also obtained through treatment of 2-(p-aminophenyl) naphth (1,2-d)oxazole-5-sulphonyl chloride (V) with secondary amines. The produced compound VI, in turn, was condensed with the same previous arylsulphonyl chlorides to give finally IV.



V, X = Cl
VI, X = N

Testing the antibacterial effect of the previous compounds, in vitro, against some bacterial species, showed a remarcable effect at a concentration 10^{-5} g/mole. The structures were established from their correct analytical data as well as ir. spectral analysis.