SUMMARY

2-|β-(3,4-Dichlorobenzoyl)vinyl|-5(4)-oxazolone (II) was prepared. (II) Reacted with toluene at room temperature in the presence of anhydrous $AlCl_3$ and gave the acrylamide derivative (III), while on carrying the reaction on boiling water bath, the propionamide derivative (IV) was obtained as the main product along with minor amount of compound (III).

Similarly, ring opening alkylation of (II) with o-xylene at room temperature gave the acrylamide derivatives (Va and Vb). However, when the reaction was carried out on boiling water bath in the presence of anhydrous $AlCl_3$ (6 mole). The products were (VI) as the main product together with minor amount from (Va).

m-Xylene reacted with oxazolone (II) of $AlCl_3$ (3 mole) at room temperature or on boiling water bath and gave one and the same product (VII) which can be hydrolysed to the propionic acid derivative (VIII).

The acrylamide derivative (IX) was obtained as the main product along with minor product of compound (X) by the action of p-xylene on oxazolone (II) at room temperature. While compound (X) was obtained as a sole product when the reaction was carried out on boiling water bath.

Treatment of 4-benzylidene-2-(4'-chlorophenyl)-5(4)-oxazolone XI with o-xylene or p-xylene in the presence of

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Similarly, ring opening alkylation of (II) with *o*-xylene at room temperature gave the acrylamide derivatives (V*a* and V*b*). However, when the reaction was carried out on boiling water bath in the presence of anhydrous $AlCl_3$ (6 mole). The products were (VI) as the main product together with minor amount from (V*a*).

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The acrylamide derivative (IX) was obtained as the main product along with minor product of compound (X) by the action of *p*-xylene on oxazolone (II) at room temperature. While compound (X) was obtained as a sole product when the reaction was carried out on boiling water bath.

Treatment of 4-benzylidene-2-(4'-chlorophenyl)-5(4)-oxazolone XI with *o*-xylene or *p*-xylene in the presence of

AlCl$_3$ (3 mole) on boiling water bath afforded hetero-ring opening followed by dearylation and gave N-aroylmethyl-*p*-chlorobenzamide (XII*a* and *b*).

4-Arylidene-2-aryl-5(4)-oxazolones (XI*a*-*i*) were prepared.

Aminolysis of (XI*a*,*c*,*f* and *g*) with primary amines in ethanol gave α-arylcarboxamido-β-arylacrylamides (XIV*a*-*m*). Also secondary amines namely, piperidine and/or morpholine reacted with (XI*a*,*c* and *i*) and yielded α-(*p*-chlorobenzamido)-β-arylacrylic acid piperidide or morpholide (XV*a*-*e*). Reaction of (XI*g* and *j*) with *p*-toluidine in acetic acid yielded the 4-arylidene imidazolinones (XVI*a* and *b*).

Hydrazinolysis of (XI*a*,*c*,*e* and *i*) with hydrazine in ethanol gave α-arylamido cinnamic acid hydrazides XVII*a*-*d* respectively.

Similarly (XI*a*,*c*,*f* and *h*) condensed with phenylhydrazine in ethanol and yielded the phenylhydrazides (XVII*e*-*h*). The phenylhydrazides (XVII*e* and *f*) were cyclised to give the triazines (XVIII*a* and *b*).

The oxazolones (XI*a*,*c*,*e* and *h*) reacted with hydroxylamine hydrochloride in pyridine and gave 4-arylidene 1-hydroxy-2-aryl-5-imidazolones (XIX*a*-*d*) which are converted to the triazines (XVIII*a* and *b*).

Azidolysis of (XIa,c,e and h) gave the α-|tetrazolyl-(1)-|-5-arylacrylic acids (XXa-d).

4-|3-Nitrophthalidene|-2-(p-chlorophenyl)-5(4)-oxazolone (XXI) was prepared to see the relative reactivity of lactone ring with the azlactone ring.

Hydrazinolysis of (XXI), with hydrazine hydrate gave a mixture of 1,4-(3-nitrophthalazindione) (XXII), and p-chlorobenzoylglycine hydrazide (XXIII).

However, hydrazinolysis of (XXI) with phenylhydrazine in ethanol yielded a mixture of 3-nitro phthalic acid - diphenylhydrazide (XXIV) and p-chlorobenzylglycine-N-phenyl-hydrazide (XXV).

Compound (XXI) reacted with cyclohexylamine yielding the imidazolone derivatives (XXVI and XXVII) in which the steric and polar factors of both addendum and substrate had been studied.

The structure assigned to the products was established from I.R. spectra (cf. Figs. 1-18) and NMR spectra (cf. Figs. 19-23).