SUMMARY

Tetrabromophthalimidoacetyl isothiocyanate **(1)** and tetrabromo phthalimido -2, 3, 4- benzoyl isothiocyanate **(2_{a-c})** were newly prepared from the corresponding acid chlorides with ammonium thiocyanate in boiling acetone.

In the present investigation, isothiocyanate **(1)** reacted with phenyl isocyanate, benzylidene arylamine and cinnamic acid derivatives to give oxadiazinone thione derivatives **(3_{a-c})**, oxadiazine thione derivatives **(4_{a-c})** and oxazine thione derivatives **(5_{a-c})** respectively via [4+2] cycloaddition reaction.

When oxadiazinone thione derivatives **(3_a)** and/or **(3_c)** was submitted to react with urea and thiourea by fusion, it gave triazine thione derivatives **(6_{a-d})**. Also oxazine thione **(5_a)** reacted with urea and thiourea to give pyrimidine dione derivative **(7_a)** and pyrimidine thione derivative **(7_b)**. Also **(5_a)** reacted with hydrazine hydrate to give pyrazole derivative **(8)**. However oxazine thione **(5_c)** reacted with urea and thiourea to give pyrimidine derivative **(9_a)** and pyrimidine thione derivative **(9_b)**. Also **(5_c)** reacted with hydrazine hydrate to give pyrazole derivative **(10)**.

On the other hand, isothiocyanate **(2_{a-c})** reacted with anthranilic acid to give the corresponding thiourea derivatives **(11_{a-c})** which cyclized when treated with acetic anhydride to the corresponding quinazoline derivatives **(12_{a-c})**. When isothiocyanate **(2_{a-c})** reacted with glycine, afforded the corresponding oxazolidinone thiol derivatives **(13_{a-c})**.

However isothiocyanate (2_{a-c}) reacted with benzoyl glycine to give the corresponding thiourea derivatives (14_{a-c}).

The thiourea derivatives (14_{a-c}) were easily cyclized when refluxed in acetic anhydride to give thionoimidazolone derivatives (15_{a-c}). When isothiocyanate (2_{a-c}) reacted with p - nitro benzoyl hydrazine, it gave the corresponding thiosemicarbazide derivatives (16_{a-c}) which cyclized when treated with acetic anhydride to triazoline thione (17_{a-c}).

Isothiocyanate (2_{a-c}) reacted with benzylidene arylamine to afford oxadiazine thione derivatives (18_{a-c}). Isothiocyanate (2_{a-c}) reacted with α- cyanocinnamonitrile to afford oxazine thione derivatives (19_{a-c}). When oxazine thione derivatives (19_{a-c}) reacted with thiourea, gave pyrimidine derivatives (20_{a-c}). Also oxazine thione derivatives (19_{a-c}) reacted with hydrazine hydrate to give pyrazole derivatives (21_{a-c}).

All of the synthesized compounds were tested toward Aspergillus flavus, E-coli, Staphylococcus aureus and fusarium moniliform.

The structure of the synthesized compounds were proved by infrared spectra and elemental analysis. Mass spectra and ^{1}H.N.M.R of the some synthesized compounds were also investigated.