

STUDIES ON PYRONES

A THESIS

In Partial Fulfilment of The Requirement

OF

MASTER OF SCIENCE DEGREE

BY

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STUDIES ON PYRONES

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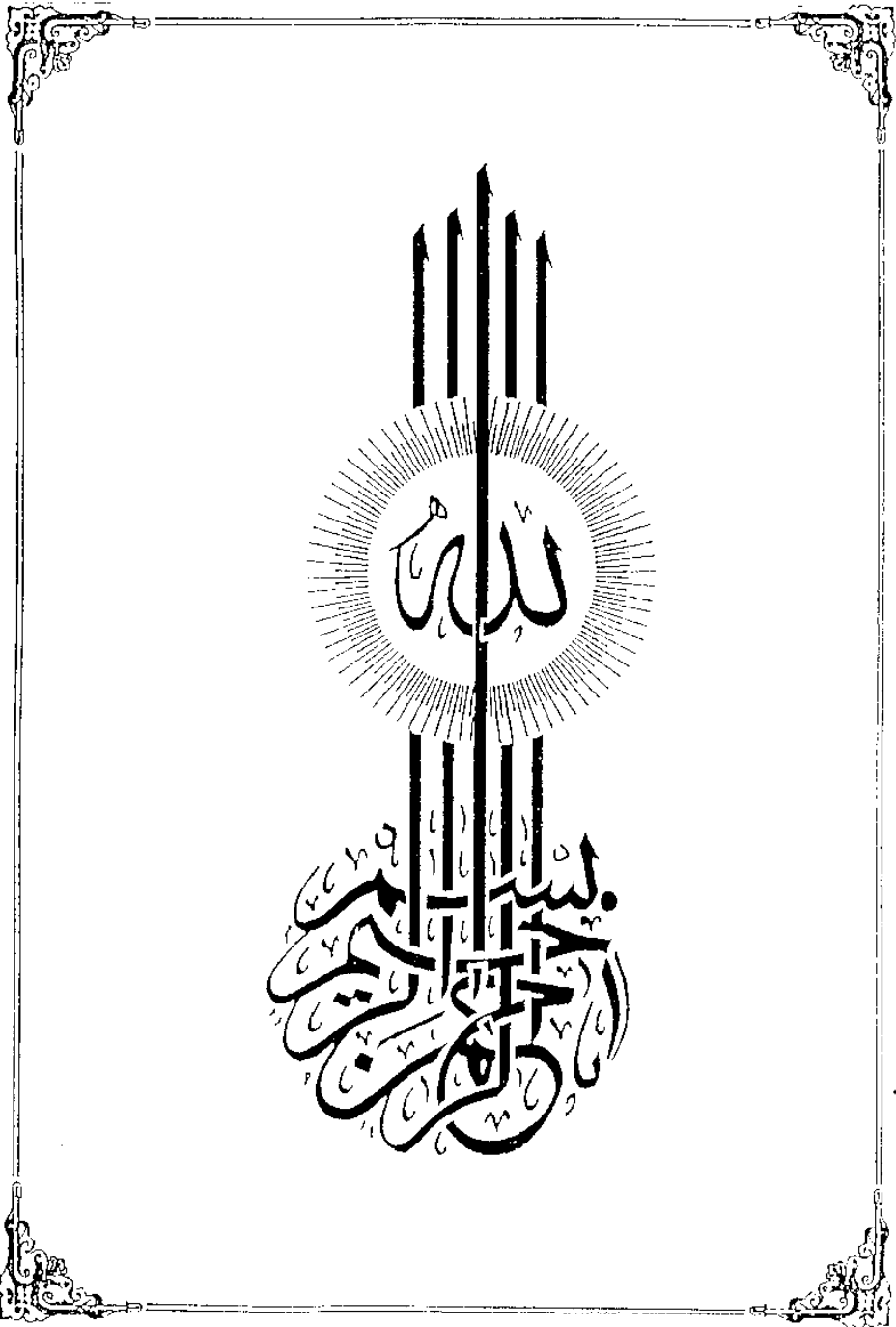
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M. Ibrahim



Head Of Chemistry Department



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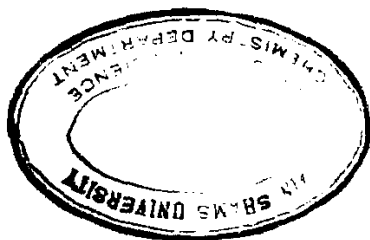
The author wishes to acknowledge his sincere gratitude and indebtedness to Dr. A. Sammour Assistant professor, Faculty of Science, and to Dr. M.I.B. Solim, Assistant professor, Faculty of Engineering, Ain Shams University. They were kind enough to suggest the lines of research investigated and to follow the progress of the work with keen interest, guidance and valuable criticism.

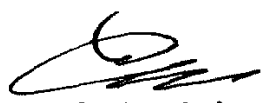
N O T E

Beside the work carried out in this thesis, the candidate has attended post-graduate course for two years in organic chemistry including the following topics :

- 1) Reaction mechanisms.
- 2) Electronic, Infrared, Raman, N.M.R., and Mass spectroscopy of organic molecules.
- 3) Microanalysis of organic compounds.
- 4) Organic reactions.
- 5) Heterocyclic compounds.

He had successfully passed an examination in these topics.

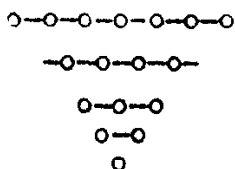



Head of Chemistry Department

C O N T E N T S

	Page
Summary of the original work	1
GENERAL PART	
I. Reactivity of pyrones	5
II. Formation of salts and alkylation at the thiocarbonyl and carbonyl group	6
III. Nucleophilic attack by amines	12
IV. Ring stability	19
V. Aromatic characters of 4-pyrones	22
VI. Acylation, Bromination and oxidation	27
VII. Reaction with active methylene compounds ...	29
VIII. Condensation with carbanions	37
IX. Reaction involving the carbonyl and thiocarbonyl group	41
X. Reaction with lactones	43
XI. Reduction	45
XII. Diels-Alder reaction	46
XIII. Reactivity and polarography of thiopyrones .	49
XIV. Equilibration studies:	54
XV. The hydrogen bonding ability	55

	Page
XVI. Exchange reactions	57
XVII. Reaction of 2-pyrones with cyanide ion ...	63
XVIII. Reaction with acetonitrile	66
XIX. Reaction with cyanoacetic acid	68
XX. Naturally occurring pyrones	74
SPECIAL PART	
Original Work	
Some Reactions with 5,6-Benzochromanone-2-	
Carboxylic Acid	78
EXPERIMENTAL	97
REFERENCES	112
Summary in Arabic	



SUMMARY OF THE ORIGINAL WORK

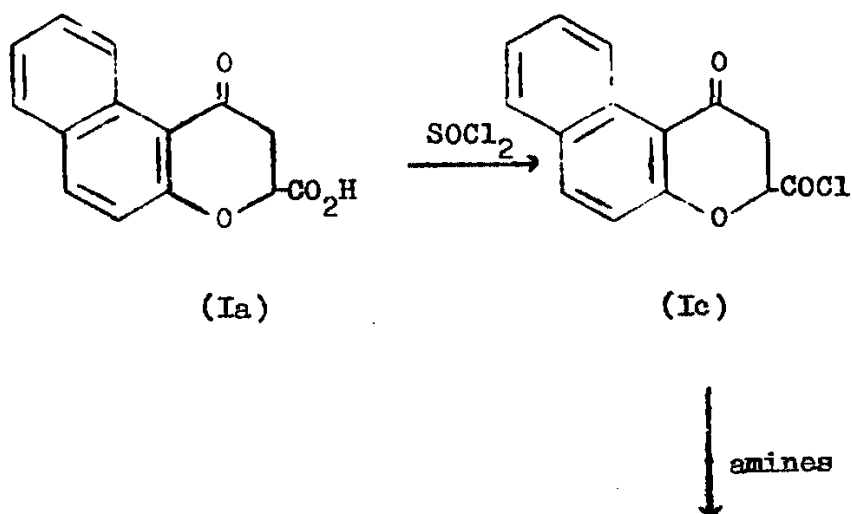
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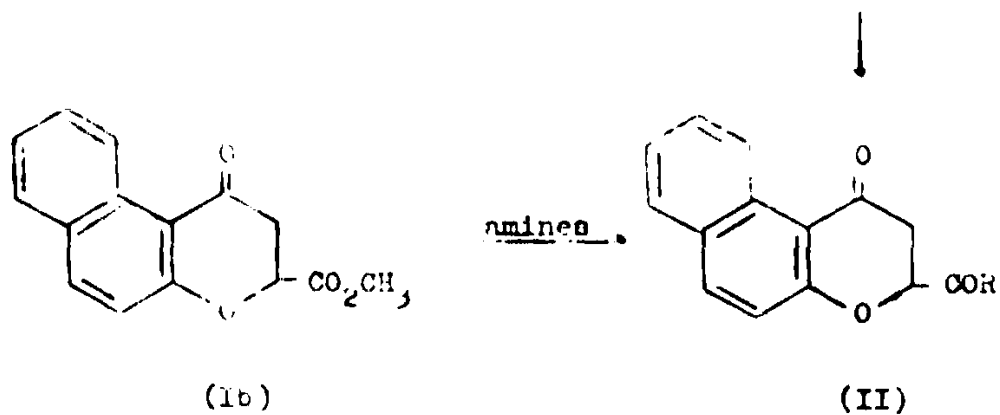
SOME REACTIONS

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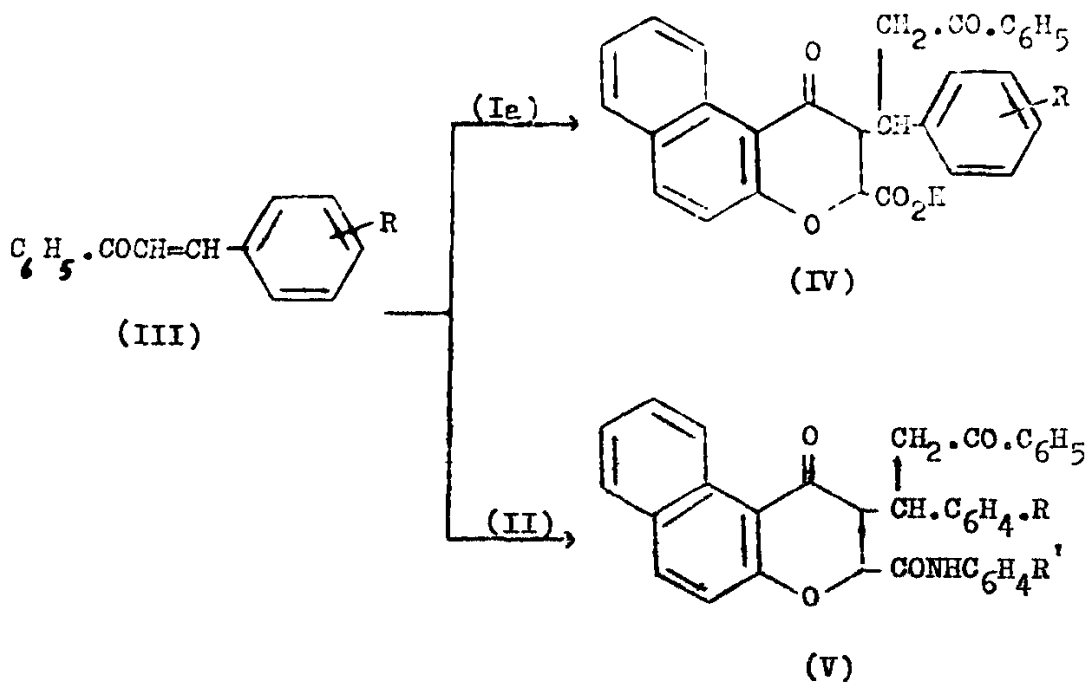
5,6-Benzochromanone-2-carboxylic acid

The reaction of methyl-5,6-benzochromanone-2-carboxylate (Ib) with amines produces the 5,6-benzochromanone-2-N-alkylcarbamides (II). These compounds have been obtained from the acid chloride (Ic).

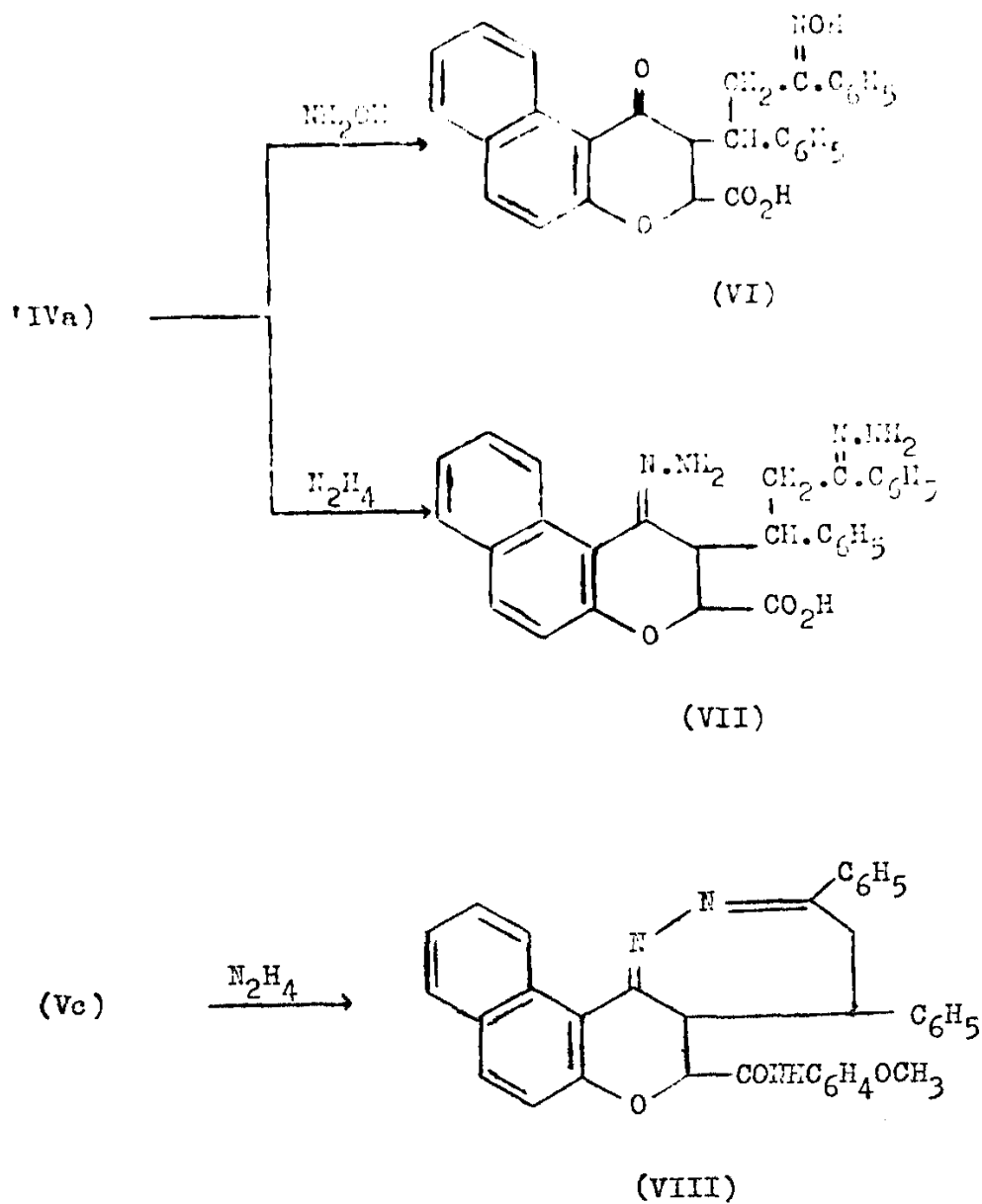




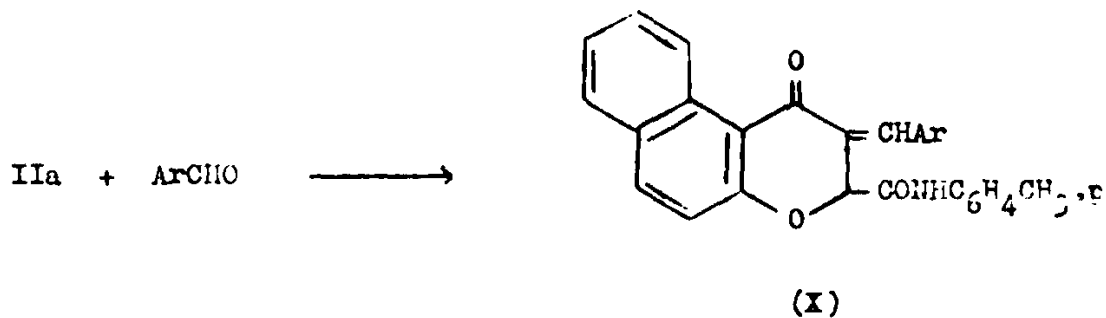
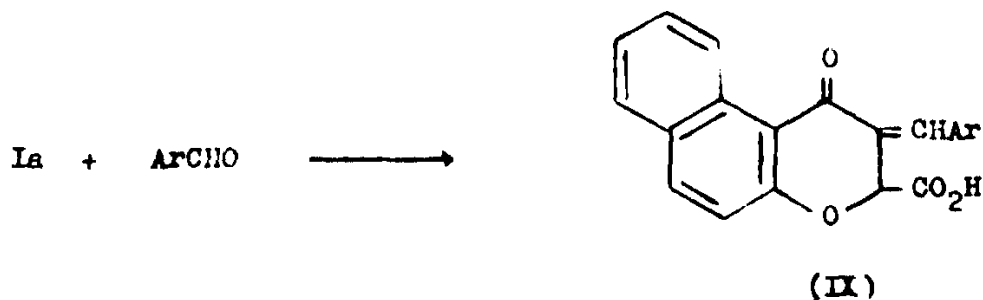
Michael reaction of Ia and II with chalcones (III) produces IV and V respectively.



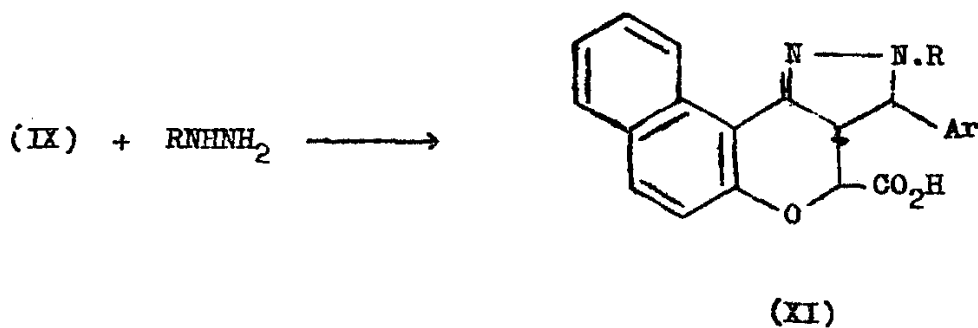
The reaction of IVa with NH_2OH gave the monoxime VI and with NH_2NH_2 yielded the dihydrazide VII. Ve reacted with NH_2NH_2 to yield the Diazepine VIII.

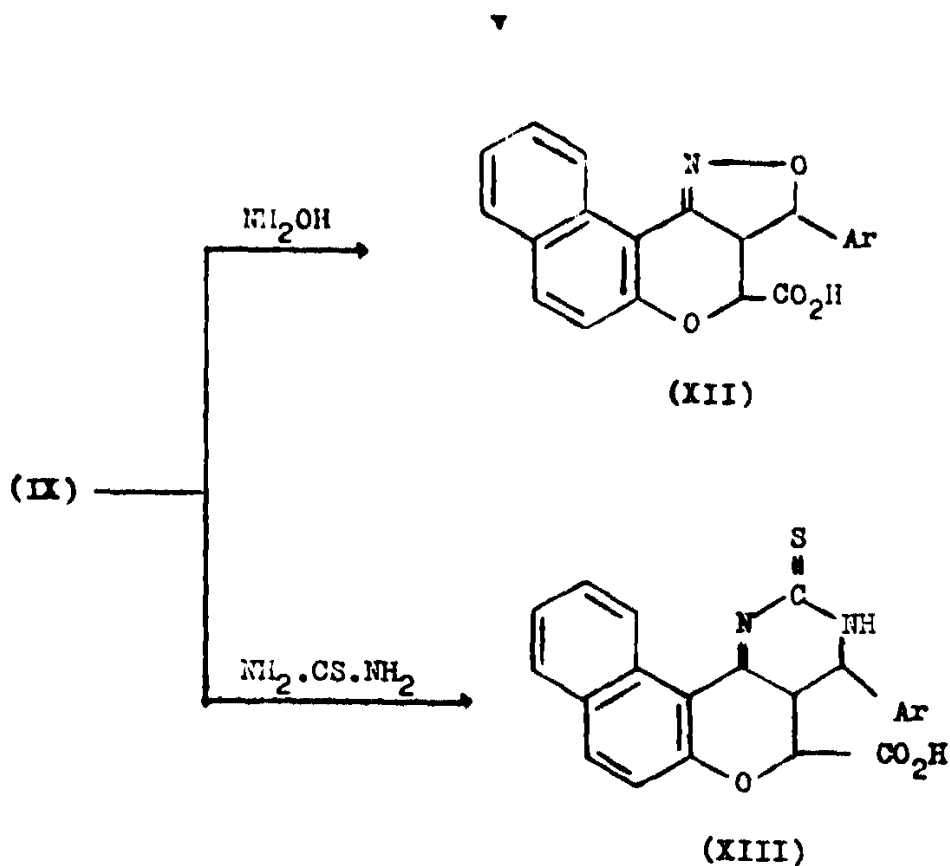


In condenses with aromatic aldehydes to give the 3-arylidene derivatives IX. With aldehydes IIa given X.

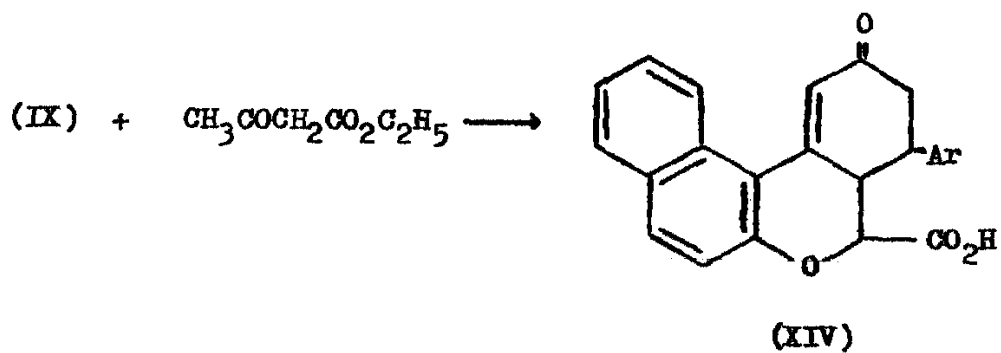


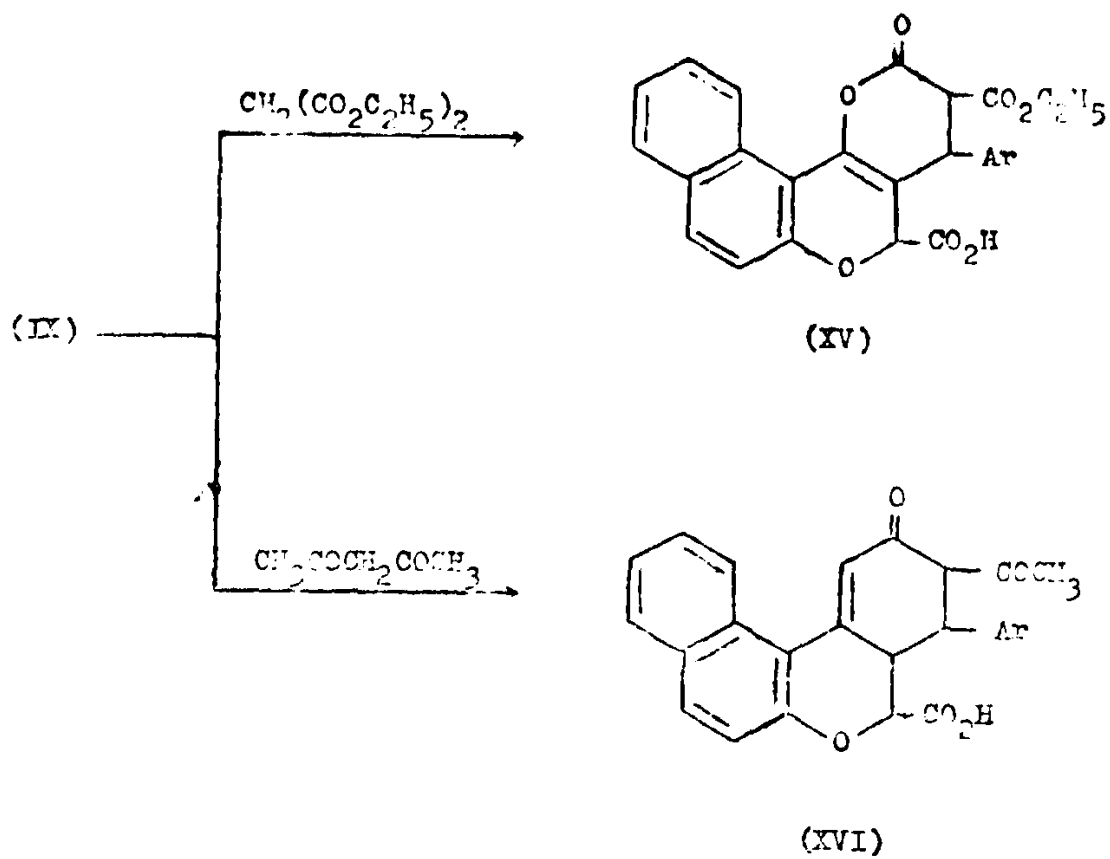
Hydrazine hydrate, phenylhydrazine, NH_2OH and thiourea reacted with IX to give the pyrazolines (XI), the isoxazolines XII and the pyrimidine-2-thiones (XIII) respectively.





The Michael condensation of IX with ethyl acetoacetate, diethyl malonate and acetylacetone yielded XIV - XVI respectively.





GENERAL PART