

## NOTES

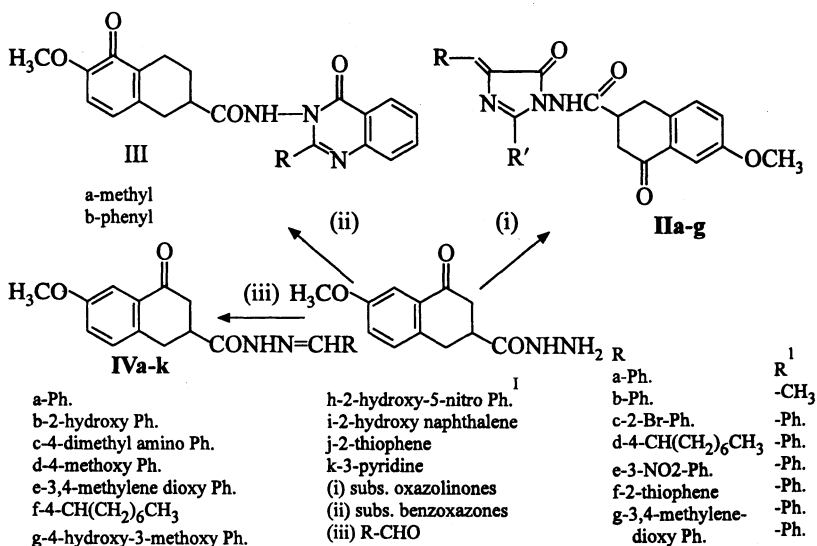
## Microwave Assisted Reactions for the Synthesis of 3-Hydrazo Carbonyl-7-Methoxy-1-Tetralone Derivatives

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The present paper discusses microwave assisted reactions for the synthesis of substituted imidazolines (**IIa-g**) from the condensation reaction of 3-hydrazo carbonyl-7-methoxy-1-tetralone (**I**) and substituted oxazolinones, and synthesis of substituted quinazolin-4(3H)-ones (**IIIa-b**) from the condensation reaction of (**I**) and substituted benzoxazones.

Microwave heating has become the standard method for many organic reactions<sup>1</sup>. The *in situ* generation of heat is efficient for significant reduction in reaction time. Microwave assisted organic reactions have advantages over the conventional organic reactions. There is improvement in yield and also decrease in reaction time. The present paper describes the synthesis and condensation reaction of 3-hydrazo carbonyl-7-methoxy-1-tetralone<sup>2</sup> (**I**) with substituted oxazolinones<sup>3</sup>, substituted benzoxazones<sup>4</sup> and aryl aldehydes.



The synthetic strategy has been outlined below:

All the above condensation reactions were carried out at 10% energy level of the microwave oven (Domestic BPL BMO-700 T). The microwave oven was modified for the use of water condenser. The general procedure for the reactions carried out in the microwave oven is as follows:

In a two necked round-bottomed flask equipped with a water condenser were taken 3-hydrazocarbonyl-7-methoxy-1-tetralone (**I**) with substituted oxazolinone derivative/substituted benzoxazone derivative (solvent pyridine 10 mL)/aryl aldehydes (solvent ethanol 15 mL.) in equimolar ratio (0.001 mol). The reaction mixture was irradiated in the microwave oven for 10–45 min (TLC). After completion of the reaction, the solvent was distilled off in vacuum. The residue obtained was crystallised from ethanol-DMF mixture (1:1).

### General Procedure for the compounds synthesized by conventional method

A mixture of **I** with substituted oxazolonone derivative/substituted benzoxazone derivative (solvent pyridine 5 mL)/aryl aldehydes (solvent ethanol 5 mL) in equimolar ratio (0.001 mol) was taken. The reaction mixture was refluxed for 3–9 h (TLC). After completion of the reaction, the solvent was distilled off in vacuum. The residue obtained was crystallised from ethanol-DMF mixture (1 : 1). The reaction period and yields of the products are given below,

Comp. No.	Microwave irradiation		Conventional methods	
	Reaction time (Min)	Yield (%)	Reaction time (h)	Yield (%)
4-benzylidene-1-(3-carboxamidyl-7-methoxy-1-tetralone)-2-substituted-5-oxo-2-imidazolines <sup>5</sup> <b>II(a-g)</b>				
a	27	56.2	8	45.23
b	25	58.3	8	51.19
c	29	61.5	7.5	38.46
d	36	57.2	7.5	48.81
e	25	73.6	8	68.20
f	27	72.2	9	65.46
g	21	76.4	7.5	68.12
2-substituted-3-(3-carboxamidyl-7-methoxy-1-tetralone)-quinazolin-4(3H)one <sup>5</sup> <b>III(a-b)</b>				
a	34	78.4	5	77.18
b	37	82.9	5	73.34
(3-arylidene hydrazocarbonyl-7-methoxy-1-tetralone) <sup>2</sup> <b>IV(a-k)</b>				
a	19	91.4	4.5	86.90
b	16	95.7	4	94.60
j	18	87.1	4	80.48
k	22	88.6	4	73.91

## Conclusion

The compounds prepared using microwave oven were found to be identical in all respects with the compounds which had been synthesized employing conventional methods. It was found that the reactions were very rapid with good yields, better quality and less time was required for the completion of the reaction.

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