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Journal Name:	Asian Journal of Physical and Chemical Sciences
Manuscript Number:	Ms_AJOPACS_40562
Title of the Manuscript:	Green Chemistry Approach for Synthesis of Bioactive 2-Thiobarbituric Acid Derivatives
Type of the Article	Original Research Article

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound. To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)



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PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments	<ol style="list-style-type: none"> 1. Have syntax and typing mistake. 2. Reference was written as [2-4] and [5, 6], need follow in same format. 3. For Introduction, <ol style="list-style-type: none"> a. Should add some literature for green chemistry. b. Add some literature and necessity of antimicrobial and cytotoxicity. c. In page3, line 9, it is written as Veeriah T et. al. then add reference. d. Vogel Al. A Text Book of Practical Organic Chemistry, 4th Edition, Longman Group Ltd., London,1978; 796. It is a book not a method. e. Correct the "Where, for the reactions the conventional reaction time and microwave reaction time were taken to the same extent of completion" where in Table 1 shows different. 4. Must add the original image of IR and ¹H NMR. 5. For characterization, ¹³C NMR must need. 6. Must add the original image of zone of inhabitation for antibacterial and fungal activity. 7. How did push30 µg in dice though disc diffusion method? 8. Page-5, line 23-24, "Three types of discs were used for anti-bacterial and anti-fungal screening" Why did use three type dices? 9. Why blank dices and where control of solvent? 10. What is the name of specific solvent? 11. Why did not add antifungal standard? 12. In cytotoxicity <ol style="list-style-type: none"> a) Must add image and why use shrimp nauplii not other? b) Why did not use the DMSO morality even it was used in sample as solvent? 13. Where are the antimicrobial activity and cytotoxicity of starting materials? Without that value it has no any demand as bioactive molecules. If the starting materials have the higher antimicrobial activity, then it is not effective. 	<p>1,2,3. We did necessary correction in the manuscript.</p> <p>4. We have the FT-IR figures but I didnot show in the manuscript because I think it will increase the length of the manuscript. But if it is necessary I will send it as supplementary file.</p> <p>5. We didnot use ¹³CNMR spectroscopic analysis because this is known compounds. We have also lack of instrumental facilities.</p> <p>6. I will send it as supplementary file.</p> <p>7. We diluted the sample as 1µg/1µl, then using micropipette we transfer 30 µl to the dices as 30 µg.</p> <p>8. Three types dices were a) for sample, b) for solvent and c) for blank dice.</p> <p>9. we use blank dices due to confirm about the contamination of blank dices. We also use control of solvent as mentioned earlier.</p> <p>10. Specific solvent means from which it was extracted.</p> <p>11. We have used ketoconazole as antifungal standard.</p> <p>12. a)As we mentioned we have some limitation and lack of lab facilities we use shrimp nauplii only.</p> <p>b) We did not use the DMSO morality because DMSO is a well-known non-toxic solvent.</p> <p>13. We didnot test the starting materials as it is reported by others.</p>
Minor REVISION comments	<ol style="list-style-type: none"> 1. Give the structure of all molecules. 2. Give some comparative studies of antimicrobial activity and cytotoxicity. 3. Write some in conclusion about antimicrobial activity and cytotoxicity. 4. Give more details about antitumor or pesticidal activity. 	
Optional/General comments	If Author can provide the Compulsory comments 1-13, then I do recommend this article for publication.	



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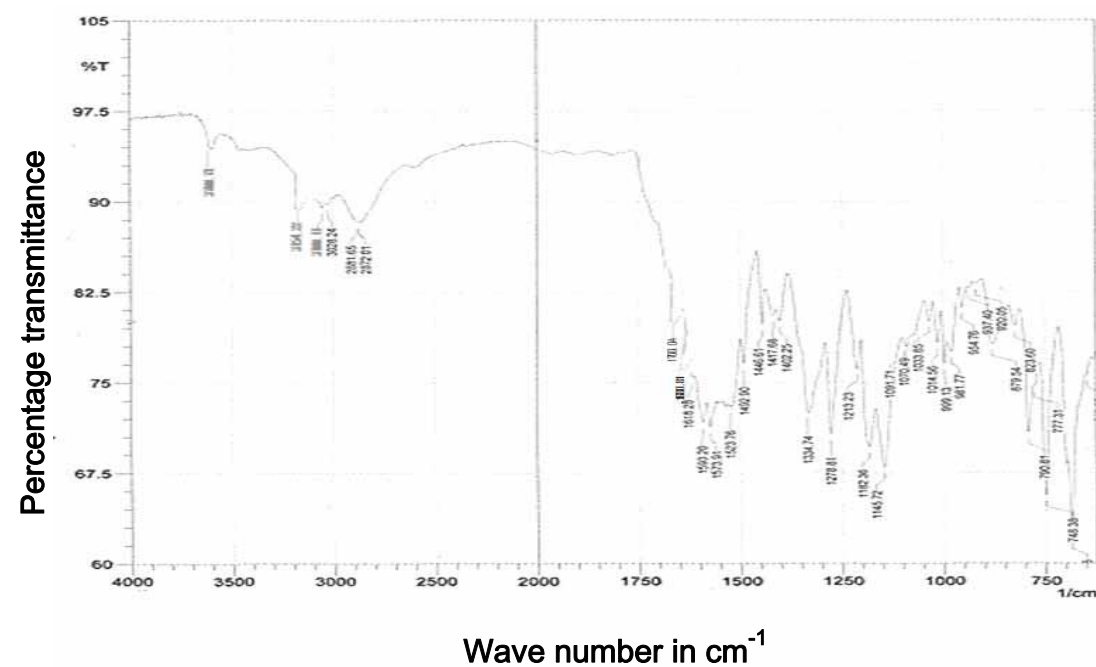


Figure 2a: IR spectrum of 5-phenyl-7-(4-hydroxyphenyl)-1,2,3,4-tetrahydro-2-thioxo-4-oxo-5H-pyrano [2,3-d]pyrimidine

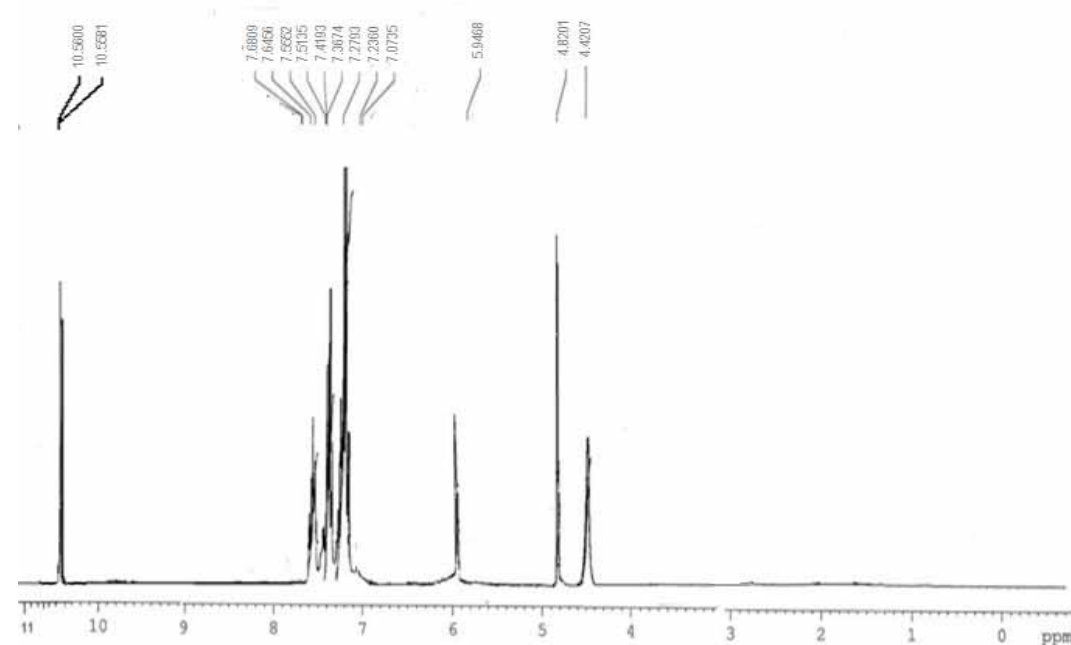


Figure 2a: NMR spectrum of 5-phenyl-7-(4-hydroxyphenyl)-1,2,3,4-tetrahydro-2-thioxo-4-oxo-5H-pyrano [2,3-d]pyrimidine



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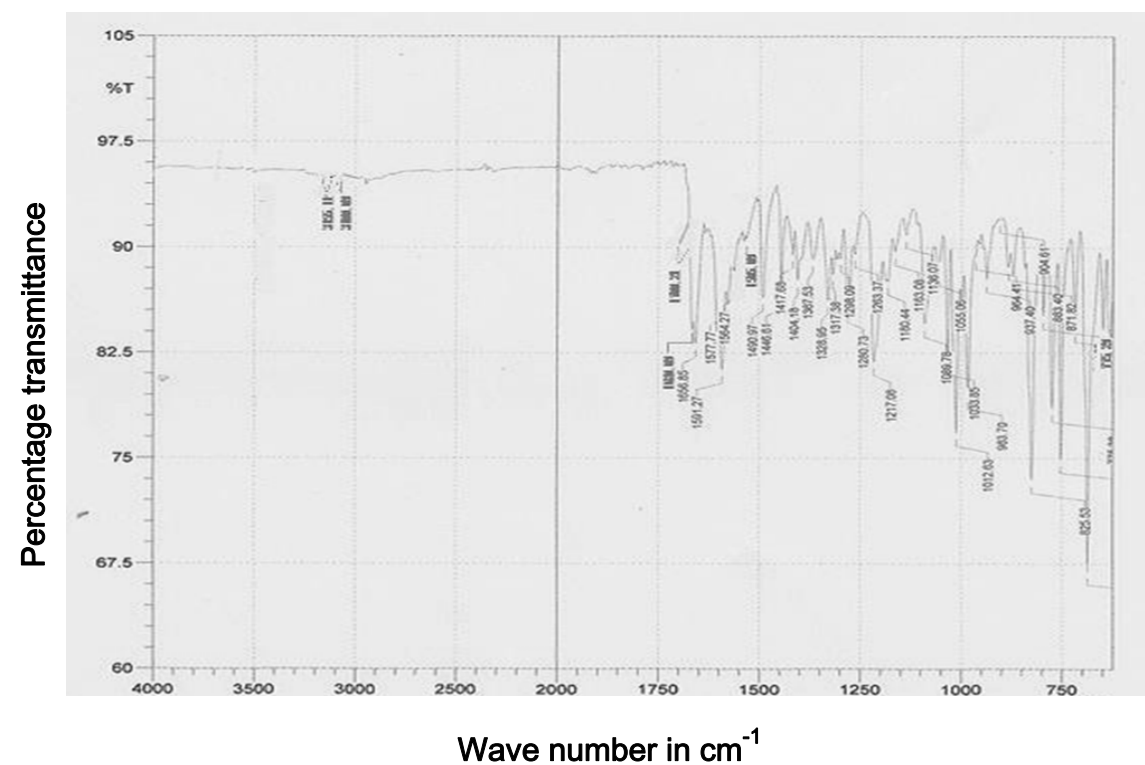


Figure 2b: IR spectrum of 5,7-di-(4-chlorophenyl)-1,2,3,4-tetrahydro-2-thioxo-4-oxo-5H-pyrano [2,3-d]pyrimidine

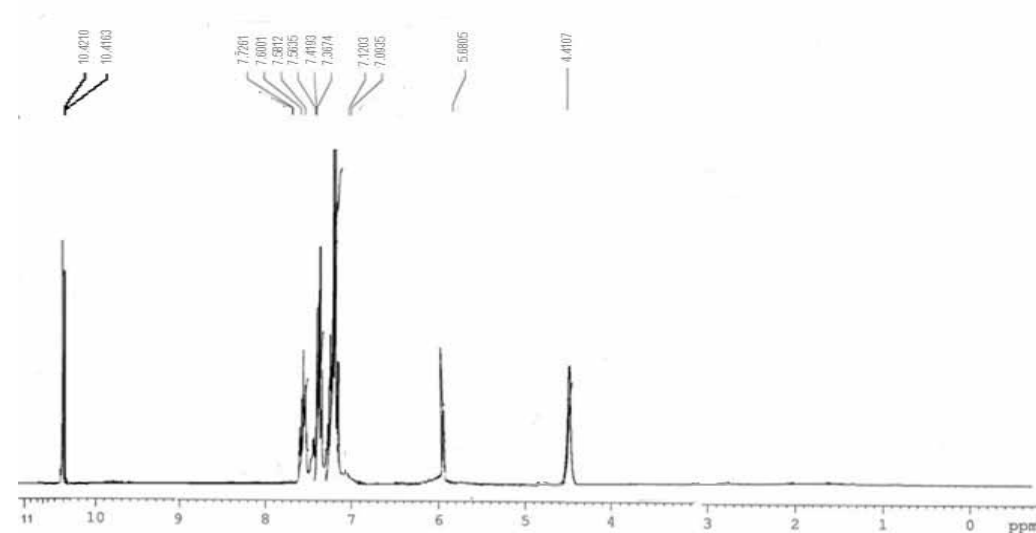


Figure 2b: NMR spectrum of 5,7-di-(4-chlorophenyl)-1,2,3,4-tetrahydro-2-thioxo-4-oxo-5H-pyrano [2,3-d]pyrimidine



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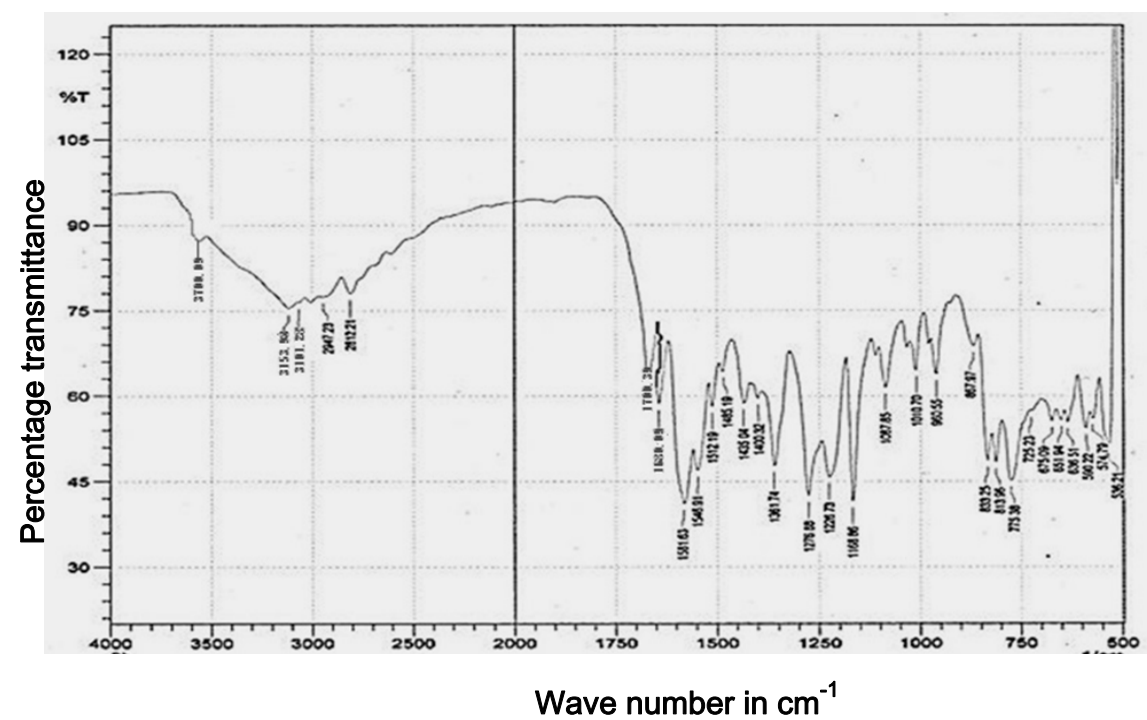


Figure 2c: IR spectrum of 5-(4-chlorophenyl)-7-(4-hydroxyphenyl)-1,2,3,4-tetrahydro-2-thioxo-4-oxo-5H-pyrano [2,3-d]pyrimidine

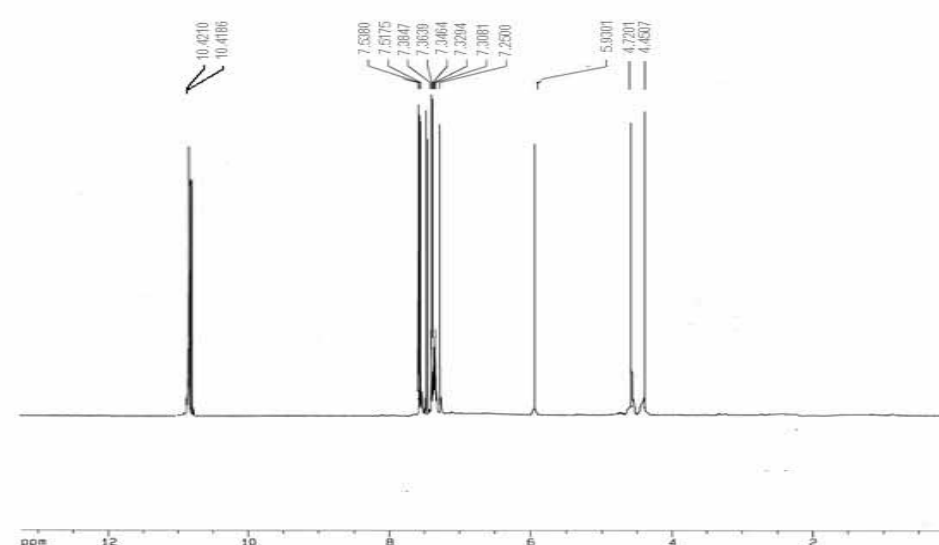


Figure 2c: NMR spectrum of 5-phenyl-7-(4-hydroxyphenyl)-1,2,3,4-tetrahydro-2-thioxo-4-oxo-5H-pyrano [2,3-d]pyrimidine

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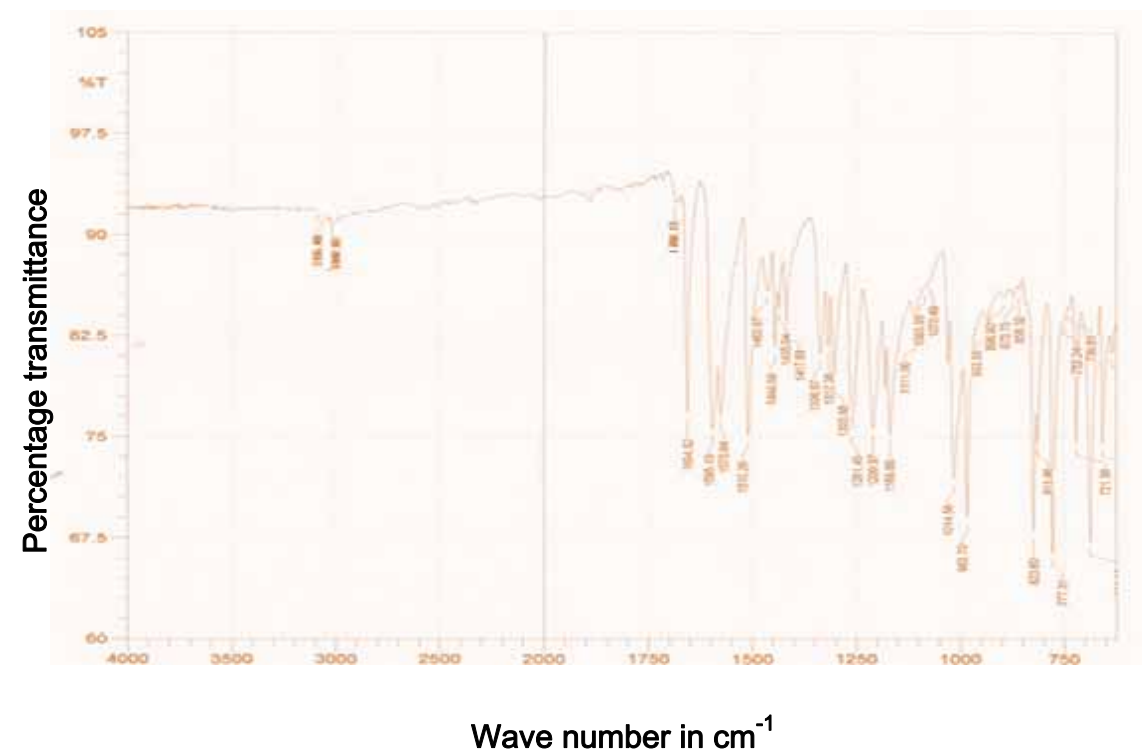


Figure 2d: IR spectrum of 5-(4-methoxyphenyl)-7-(4-hydroxyphenyl)-1,2,3,4- tetrahydro-2-thioxo-4-oxo-5H-pyrano [2,3-d]pyrimidine

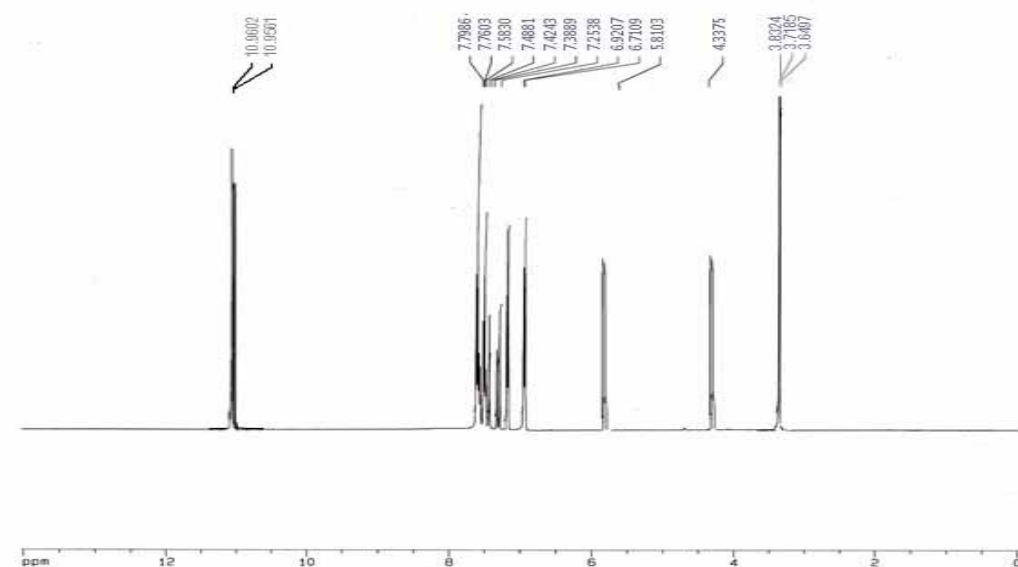


Figure 2d: NMR spectrum of 5-(4-methoxyphenyl)-7-(4-hydroxyphenyl)-1,2,3,4-tetrahydro-2-thioxo-4-oxo-5H-pyrano [2,3-d]pyrimidine



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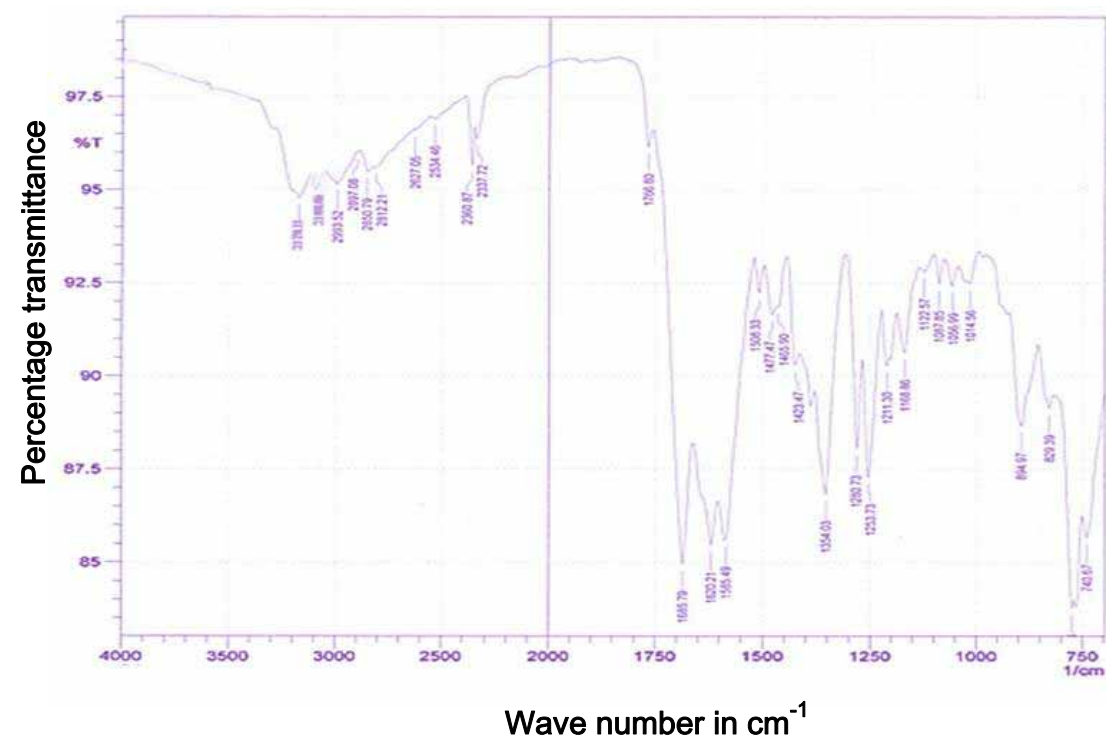


Figure 2e: IR spectrum of 5-(4-methoxyphenyl)-7-(4-chlorophenyl)-1,2,3,4-tetrahydro-2-thioxo-4-oxo-5H-pyran(2,3-d)pyrimidine

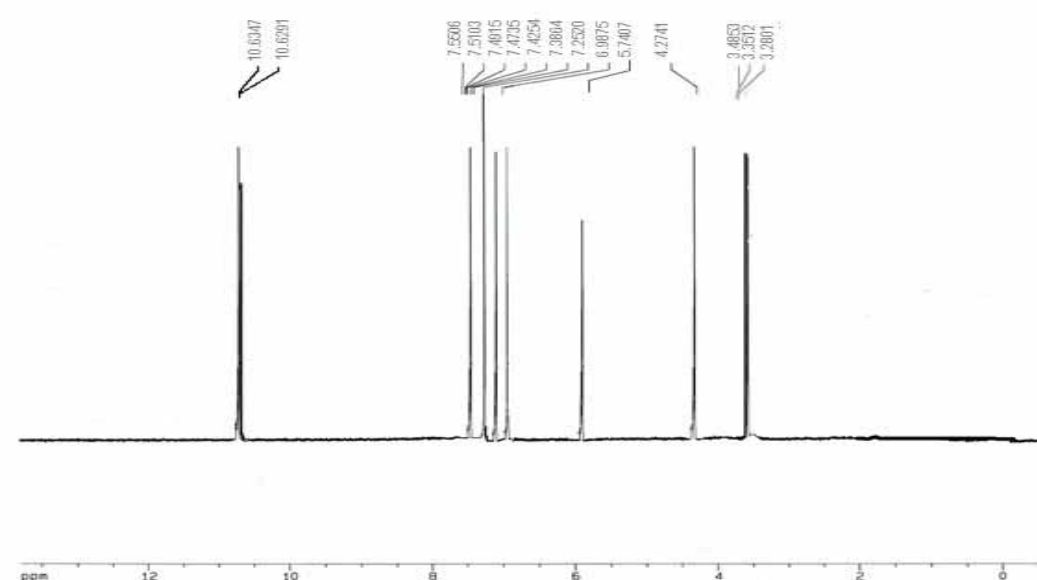


Figure 2e: NMR spectrum of 5-(4-methoxyphenyl)-7-(4-chlorophenyl)-1,2,3,4-tetrahydro-2-thioxo-4-oxo-5H-pyran(2,3-d)pyrimidine

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Figure: Hatching of brine shrimp eggs