

Rayat Shikshan Sanstha's

Radhabai Kale Mahila Mahavidyalaya, Ahmednagar

Department of Chemistry

Academic Year 2018-2019

M. Sc. II

Project Student List

Sr. No.	Name of student	Title of project
1	Adhav Manisha N.	Microwave assisted synthesis of dimethyl (phenyl amino)(p-tolyl)methyl phosphonate
2	Bhite Archana Haribhau	Synthesis of 5-(2-(3-fluorophenyl)-4-methylthiazol-5-yl)-N-phenyl-1,3,4-thiadiazole-2-amine
3	Dangore Amruta B.	Synthesis of dimethyl phenyl(phenyl amino) methyl phosphonate
4	More Aparna Sunil	Synthesis of [(5-Bromo-2-hydroxy-phenyl)](1-4-(4-chloro phenyl)thiazol-2-yl)-1H-pyrazol-3-yl)Methanone
5	Khan Tarannum Abubakar	Synthesis of (4E)-1-phenyl-4((thiophen-2-yl)methylene)-1H-pyrazol-5(4H)-one derivatives by green approach
6	Landage Rutuja Suresh	Synthesis of 5-(2-(3-fluorophenyl)-4-methylthiazol-5-yl)-N-phenyl-1,2,4-triazole-3-thiol
7	Pawar Padmashri Nandu	Study of alkylation reactions catalyzed by Ionic liquid based Ferrite nanoparticle
8	Raut Poonam S.	Synthesis of (Z)-(2-(4-(4-chlorophenyl)thiazol-2-yl)-2H-imidazol-4-yl)(phenyl) methanone oxime and coordination chemistry with Zn metal ion

  
HEAD

Department of Chemistry  
Radhabai Kale Mahila Mahavidyalaya,  
Ahmednagar

A  
Project report  
On

**“[(5-Bromo-2-hydroxy- phenyl)](1-4-(4-chloro phenyl)  
thiazol-2-yl)-1H-pyrazol-3-yl)Methanone”**

**M. Sc. PROJECT CARRIED OUT AS PART OF CURRICULUM FOR THE DEGREE OF**  
*Master of science*

In  
*ORGANIC CHEMISTRY*

**Submitted by**  
Miss. Aparna Sunil More.  
2018 – 2019

UNDER THE GUIDANCE OF  
**Dr. H. N. Akolkar**



*Submitted to P.G. And research,*  
*Department of Chemistry*

**Radhabai Kale MahilaMahavidyalaya**  
**Ahmednagar**

## CERTIFICATE

This is to Certified that the work incorporated in the project entitled “[(5- Bromo -2- hydroxy- phenyl)] (1- 4-(4 -chloro phenyl) thiazol-2-yl)-1H pyrazol-3-yl) methanone” submitted by Miss.Aparna Sunil More. was carried by the candidate under my supervision. such material as obtained from other source has been duly acknowledged in this report.

Date: 15/4 /2019

Dr. H. N. Akolkar

Project Guide

HEAD

Department of Chemistry  
Shabal Kale Mahila Mahavidyalaya,  
Ahmednagar

Signature  
20/04/2019

Signature  
20-4-19

## DECLARATION

I declare that the report entitle “[**(5-Bromo-2-hydroxy phenyl)**](**1-4-(4-chloro phenyl) thiazol-2-yl)-1H-pyrazol-3 -yl**)methanone” submitted by me for the degree of M.Sc in the record of work carried out by me during the period of from June 2018 to February 2019 under the guidance of **Dr. H. N. Akolkar.**

I further declare that the material obtained from other sources has been duly acknowledged in the report.

Date : 15 / 4 /2019

Apmore

**Miss. Aparna S More.**

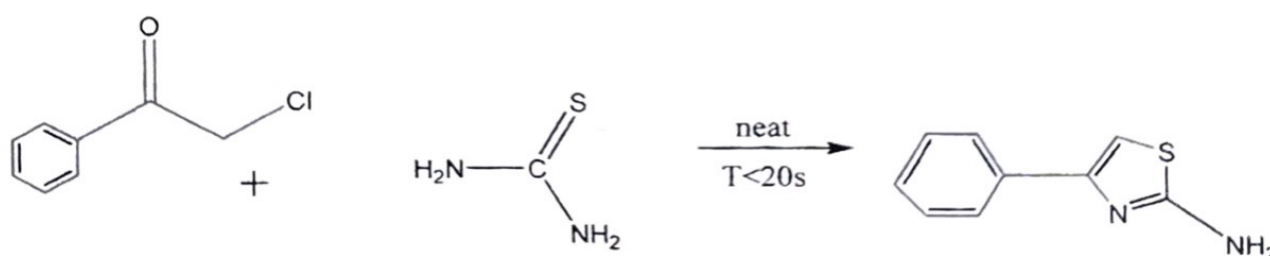
## INTRODUCTION

Thiazole or 1,3- thiazole is a heterocyclic compound that contains both sulphur and nitrogen. The thiazole ring is notable as a component of the vitamin thiamine.

An azole is a class of five membered nitrogen heterocycles containing at the at least one other non carbon atom like nitrogen, sulphur or oxygen. It has showed wide application in medical chemistry due to diverse therapeutic properties which includes dyslipidemia, antiarthritis, anti-inflammatory, antidiabetes, anticoagulant, antiobesity, pestisides, antimicrobial, antihypertensive, anticonvulsant, antidepressants, antioxidant etc. [1-4].

Compounds having chromone moiety are associated with interesting physiological activities. Chromones having heterocyclic substituents at 2-and 3- position have been reported to possess coronary-dilatory activity muscular relaxation effect and antimicrobial activity. Pyrazole moiety compounds are associated with bactericidal, anti-inflammatory and hepatoprotective activities. [5].

The Hantzsch thiazole synthesis is a reaction between halo ketones and thiamides.



Hantzsch condensation of 2-chloroacetophenones with thiosemicarbazide enable a simple, fast and ecofriendly solvent free synthesis of 2-aminothiazole without use of in a few seconds and products are obtained in a good yields after easy workup. [6-10]

## REFERENCES

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A  
Project report  
On

**“STUDY OF ALKYLATION REACTIONS CATALYZED BY LONIC  
LIQUID BASED FERRITE NANOPARTICLE”**

M. Sc. PROJECT CARRIED OUT AS PART OF CURRICULUM FOR THE DEGREE OF

*Master of science*

In

*ORGANIC CHEMISTRY*

**Submitted by**

Miss Padmashri Nandu Pawar

2018 – 2019

UNDER THE GUIDANCE OF

**PROF. KAWALE R. A.**



*Submitted to P.G. And research,*

*Department of Chemistry*

**Radhabai Kale Mahila  
Mahavidyalaya  
Ahmednagar**

## CERTIFICATE

This is to certified that the work incorporated in the project entitled "Study of Alkylation Reaction Catalysed by Ionic Liquids Based Ferrite Nanoparticle" being submitted to the Head, P. G. and Research, Department of Chemistry, Radhabai Kale Mahila Mahavidyalaya, Ahmednagar and Savitribai Phule Pune University, Pune by Miss. Pawar Padmashri Nandu was carried out under my supervision. Such material as obtained from other sources has been duly acknowledged in this report.

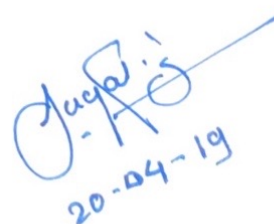
Date: /04/2019



Prof. Kawale R. A.  
(Project Guide)  
R.K.M.M.  
Ahmednagar



Head,  
Department of Chemistry  
R.K.M.M.  
Ahmednagar



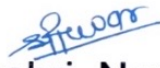


## ACKNOWLEDGEMENT

It's my great pleasure to express a deep sense of gratitude to my respected project guide Prof. Kawale R. A. for his excellent guidance, stimulating discussion, keep interest and continuous encouragement while completing the research work. His inspiring and ultimate guidance, helped me to develop skill and sight in research. I must express my deep sense of gratitude to Prin. Dr. Patil D. D., Principal, Radhabai Kale Mahila Mahavidyalaya Ahmednagar for providing the necessary facilities and constant encouragement.

I am also thankful to Mr. Kunde S. P., Dr. Akolkar H. N. and all teaching and non-teaching staff of Department of Chemistry Radhabai Kale Mahila Mahavidyalaya Ahemdnagar for their co-operation.

Finally, I would like to express my deep appreciation to my family members for their tolerance, patience, constant encouragement during the period of this work.

  
Padmashri Nandu Pawar  
(M. Sc. Organic Chemistry)  
2018 - 2019  
R. K. M. M. Ahmednagar

## INTRODUCTION

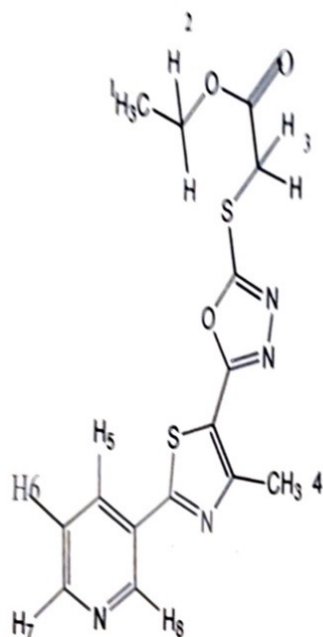
In a recent review article magnetic nanoparticles are more effective due to their magnetic Nano properties [1,2]. Magnetic nanoparticles have been studied with biomedical application such as magnetic resonance imaging for clinical diagnosis magnetic drug targeting, hyperthermia, anticancer strategy and enzyme immobilization [3].

Magnetic nanoparticles like  $\text{Fe}_3\text{O}_4$  with silica ( $\text{SiO}_2@\text{Fe}_3\text{O}_4$ ) supports for the mobilization of homogeneous catalyst. The nonporous magnetic nanoparticles activate the distribution of active sites which are catalytic. So that the pore diffusion avoided. Magnetic separation because recover the catalyst from liquid phase actions more efficiently than filtration and centrifugation [4].

Recent studies shows that the silica coated magnetic nanoparticles has many properties like excellent thermal stability ease of synthesis and functionalization, high surface area to volume ration, low toxicity and effortless separation from the reaction medium through magnetic forces and due to their exceptional properties silica coated magnetic nanoparticles is a powerful catalytic support [5-10].

The literature survey revealed that the ionic liquid which is used as environment friendly green solvent because it can dissolve in organic, organometallic and inorganic compounds. Ionic liquids also have unique physicochemical properties like low volatility high thermal stability, high

## NMR Spectra:-



Proton	value	Multiplicity	No. of proton
H1	1.22	Triplet	3H(CH3)
H2	4.18	Quartet	2H(CH2)
H3	4.30	Singlet	2H(CH2)
H4	2.74	singlet	3H(CH3)
H5	8.37	Doublet triplet	of 1H(Ar-H)
H6	7.57	doublet doublet	of 1H(Ar-H)
H7	8.73	doublet doublet	of 1H(Ar-H)
H8	9.18	doublet	1H(Ar-H)

## REFERENCE

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Rayat Shikshan Sanstha's

Radhabai Kale Mahila Mahavidyalaya, Ahmednagar

Department of Chemistry

Academic Year 2019-2020

M. Sc. II

Project Student List

Sr. No.	Name of student	Title of project
1	Jadhav Jyoti Baban	Microwave assisted knoevenagel condensation of novel 3-(trifluoromethyl)-1-(perfluorophenyl)1 <i>H</i> -pyrazole-5(4 <i>H</i> )one with 4-formyl pyrazole
2	Kale Vrushali Bharat	Study of tetrasubstituted imidazole reaction catalyzed by sulphonic acid and functionalized silica coated ferrite nano particles.
3	Kalamkar Nilam Appasaheb	Study of tetrasubstituted imidazole reaction catalyzed by sulphonic acid and functionalized silica coated ferrite nano particles.
4	Kandake Ashwini Raosaheb	Synthesis of Schiff's bases by conventional and non-conventional method.
5	Shelke Bhakti Raosaheb	Synthesis of some 2-acetyl 5-chlorothiophene.

  
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Department of Chemistry  
Radhabai Kale Mahila Mahavidyalaya  
Ahmednagar



Rayat Shikshan Sanstha's

## Radhabai Kale Mahila Mahavidyalaya, Ahmednagar

Reaccredited with 'A' Grade by NAAC/An ISO 9001:2015 Certified College  
Affiliated to Savitribai Phule Pune University, Pune (PU/AN/ASC/034)

### Department of Chemistry

#### List of Project Students M. Sc. II Organic Chemistry 2021-22

Sr. No.	Name of Student	Project Title	Name of Supervisor
1	Swati Ganpat Shirsath	Synthesis of 1,2,3-Triazole Incorporated Thiazolidine-2,4-dione Derivatives	Dr. M. H. Shaikh
2	Sonali Dinkar More	Synthesis of 1,2,3-Triazole Incorporated Thiazolidine-2,4-dione Derivatives	
3	Pratiksha Narayan Shinde	Synthesis of 1,2,3-Triazole Incorporated Phenol Derivatives	
4	Dipali Sanjay Chavan	Synthesis of 1,2,3-Triazole Incorporated Phenol Derivatives	
5	Nayan Dilip Shelke	Synthesis of 1,2,3-Triazole Incorporated Pyrazole Derivatives	
6	Kalyani Rajendra Abhale	Synthesis of 1,2,3-Triazole Incorporated Pyrazole Derivatives	
7	Ankita Sunil Mandlik	Synthesis of 1,2,3-Triazole Incorporated Thiazolidine-2,4-dione Derivatives	
8	Punam Shankar Rathod	Synthesis and Characterization of (2 <i>E</i> , 11 <i>E</i> )- <i>N</i> '-benzylidenecinnamohydrazide	Dr. R. S. Endait
9	Swapnali Savkar Shinde	Synthesis and Characterization of (4 <i>E</i> )-4-Benzylidene-1-Phenyl-1 <i>H</i> -pyrazol-5(4 <i>H</i> )-one	



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