

Shri Shivaji Education Society, Amravati's
SHRI SHIVAJI COLLEGE OF ARTS, COMMERCE AND SCIENCE, AKOLA

NAAC Re-accredited with 'A' Grade (CGPA 3.11)
UGC Status 'College with Potential for Excellence'

Near Shivaji Park, Akola 444 001

Phone & Fax : 0724- 2410438/2411039

Website : shivajiakola.org

E-mail : principal@shivajiakola.org

Index No. Jr College : 01.01.004/Sr. College : 205



Late Dr. Panjabrao Deshmukh
Founder President

Adv. Arunbhau Shelke
President

Dr. Subhash Bhadange
Principal

Ref. No. : 1584

Date : 29.08.2015

To,

**The Director,
B. C. U. D.,
Sant Gadge Baba Amravati University,
AMRAVATI.**

Subject :- Request for forwarding Final Project Report, Statement of Expenditure and Audited Utilization Certificate to UGC Western Regional Office, Ganeshkhind Pune with your recommendations

Sir,

I am enclosing herewith Final Project Report, Statement of Expenditure and Audited Utilization Certificate of Minor Project in chemistry UGC File No.47-159/12(WRO) Dated :- 15 April-2013 entitled "**Studies on Incidence and Extent of Pesticide Residues in Natural Water Reservoirs in Akola Distt. Of Vidarbha Region (Maharashtra)**" sanctioned by U.G.C. to Dr. S. G. Bhadange, Department of Chemistry of our college in prescribed format of UGC.

You are therefore requested to forward the same to the Joint Secretary, UGC Western Regional Office, Ganeshkhind Pune for further necessary action.

Kindly do the needful.

Thanking you in anticipation.

Yours Faithfully,


PRINCIPAL

Shri Shivaji College of Arts,
Commerce & Science, AKOLA.
A Grade C. GPA. 3.11, by NAAC
Akola.



Encl :-

1. Final Project Report.
2. Statement of Expenditure.
3. Audited Utilization Certificate.



Shri Shivaji Education Society, Amravati's

SHRI SHIVAJI COLLEGE OF ARTS, COMMERCE AND SCIENCE, AKOLA

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Late Dr. Panjabrao Deshmukh
Founder President

Adv. Arunbhau Shelke
President

Dr. Subhash Bhadange
Principal

Ref. No. : 01/580.

Date : 29/08/2015

To,

The Joint Secretary,
University Grants Commission,
Western Regional Office,
Ganeshkhind,
PUNE - 411007. (M.S).

Through :- Director, B.C.U.D., Sant Gadge Baba Amravati University, Amravati.

Subject :- Submission of Final Project Report, Statement of Expenditure and Audited Utilization Certificate.

Sir,

Kindly find herewith Final Project Report, Statement of Expenditure and Audited Utilization Certificate of Minor Project in chemistry UGC File No.47-159/12(WRO) Dated :- 15 April-2013. entitled "Studies on Incidence and Extent of Pesticide Residues in Natural Water Reservoirs in Akola Distt. Of Vidarbha Region (Maharashtra)" sanctioned by U.G.C. to Dr. S. G. Bhadange, Department of Chemistry of our college in prescribed format of UGC.

Kindly do the needful.

Thanking you in anticipation.

(Dr. Z. H. Khan)
Co-ordinator RAC
Shri. Shivaji College, Akola



Yours Faithfully,

(Signature)
Principal,
Shri Shivaji College of Arts,
Commerce and Science,
Akola, AROLA,
A Grade C. GPA. 3.11, by NAAC

Encl :-

1. Final Project Report.
2. Statement of Expenditure.
3. Audited Utilization Certificate.



UGC MINOR RESEARCH PROJECT

FINAL PROGRESS REPORT

Statement of Expenditure and Audited Utilization Certificate.

Title :

**“Studies on Incidence and Extent of Pesticide Residues in
Natural Water Reservoirs in Akola.
Distt. Of Vidarbha Region (Maharashtra)”**

For the year- 2013 -15
No.F.47-159/12 (WRO) Dated -15 April 2013

Date of implementation- 01 July 2013

Name of Principal Investigator

Dr. S. G.Bhadange

Department of Chemistry

**SHRI SHIVAJI COLLEGE OF ARTS, COMMERCE AND
SCIENCE, AKOLA. (M. S.)**

July 2015

www.shivajiakola.ac.in

To,

The Joint Secretary,
U.G.C. Pune University Campus
Ganesh Khind,
PUNE

Ref :- F.47-159/12 Dated -15 April 2013

Sub :- Release of Rs. 30,669/- towards the expenditure incurred under MRP.

Through :- Proper Channel

Respected Sir,

Vide subject cited above you are requested to release the amount of Rs.30,669/- towards the expenditure incurred under M.R.P. The total amount sanctioned for the M.R.P. was 1,20,000/-, Out of this the amount of Rs.90,000/- was only released as a first installment.

Till the completion of the study the total expenditure incurred was Rs.1,20,669/-. The amount of Rs.669/- was spent more than that of Sanction of Rs.1,20,000/-.

The amount of Rs.669/- was necessary to spend for the completion of the study or otherwise it was not possible to complete the study under the M.R.P.

The Details of the expenditure are given below


Sr. No.	Sanction Amount Rs.	Amount Released Rs.	Total Expenditure Incurred Rs.	Amount to be leased Rs.
1	1,20,000/-	90,000/-	1,20,669/-	Rs.1,20,000/- Rs. 90,000/- A 30,000=00 II nd Installment B Excess Expenditure incurred for the completion for the Completion of the study Rs. 1,20,669-90,000= 30,669 /- Total amount to be released A=Rs.30,669=00/- B = Rs. 669 = 00/- Total Rs. 30,669 = 00/-

Kindly Send the Remaining amount of Rs. 30,669/-

Thanking You


Principal Investigator
Shri Shivaji College, Akola




(DR.S.G.Bhadange)
Principal
Shri Shivaji College of Arts,
Arts, Commerce & Science, AKOLA.
A Grade C. AKOLA, 11, by NAAC

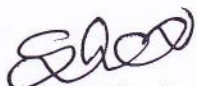

(Dr. Z. H. Khan)
Coordinator RAC
Shri Shivaji College, Akola

**UNIVERSITY GRANT COMMISSION
WESTERN REGIONAL OFFICE GANESHKIND,
PUNE - 4411007**


UTILISATION CERTIFICATE

It is certified that the grant of Rs. 1,20,000/- Sanctioned by the University Grant Commission for U.G.C. Sponsored Minor Research Project in Chemistry Department to Dr. S. G. Bhadange has been utilized as per details given in the attached, statement in accordance with the terms and conditions laid down by the University Grant Commission wide letter No. F.47-159/12(WRO) Dated :- 15th April 2013. (Full allotted amount) and. as these terms and conditions have been fulfilled by the college/ University and the grant has been utilized for the purpose for which it was sanctioned.

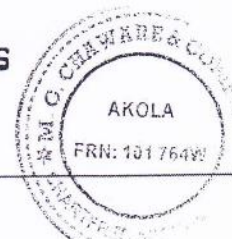
It is further certified that inventories of permanent of semi permanent assets created /acquired wholly or mainly out of the grants given by the university Grant Commission as indicated above are being maintained in the prescribed form and are being kept up to date and these assets have not been disposed of encumbered of utilized for any purpose.


Principal Investigator
[Dr. S. G. Bhadange]




Principal
Shri Shivaji College of Arts,
Commerce & Science, Akola


M. G. CHAWARE
CHARTERED ACCOUNTANTS
M. No. 32803




**UNIVERSITY GRANTS COMMISSION
BAHADUR SHAH ZAFAR MARG
NEW DELHI - 110 002.**

STATEMENT OF EXPENDITURE IN RESPECT OF MINOR RESEARCH PROJECT


1. Name of Principal Investigator :- Dr. S. G. Bhadange
2. Department of University/College :- Shri Shivaji College of Arts, Commerce & Science, Akola.
3. UGC approval No. and Date :- No.F.47-159/12 (WRO) Dated -15 April 2013
4. Title of the Research Project :- "Studies on Incidence and Extent of Pesticide Residues in Natural Water Reservoirs in Akola Distt. Of Vidarbha Region (Maharashtra)"
5. Effective date of starting the project :- 01 July 2013
6. (a) Period of Expenditure :- From July 2013 to July 2015
7. Details of Expenditure

Sr No	Item	Amount Approved Rs.	Expenditure Incurred Rs.
i	Books & Journals	10000/-	10035/-
ii	Contingency	10000/-	10117/-
iii	Field Work/Travel (Give details in the proforma at Annexure- VII).	10000/-	10200/-
iv	Equipment	50000/-	50000/-
v	Chemicals & Glassware	40000/-	40317/-
vi	Other head [Special Need]	Nil	Nil
vii	Total= [First year Rs 90000/- + Second Year grant Rs.30000/-]	1,20,000/-	1,20,669/-

4. It is certified that the grant of Rs. 12,0000/- (Rupees. One Lack Twenty thousand only) received from the University Grants Commission under the scheme of support for Minor Research Project entitled "**Studies on Incidence and Extent of Pesticide Residues in Natural Water Reservoirs in Akola Dist. Of Vidarbha Region (Maharashtra)**" vide UGC letter No. F.47-159/12 Dated -15 April-2013 has been fully utilized for the purpose for which it was sanctioned and in accordance with the terms and conditions laid down by the University Grants Commission.


Principal Investigator
Dr. S. G. Bhadange]




PRINCIPAL
Shri Shivaji College of Arts,
Commerce & Science, AKOLA,
A Grade C, 3, 11, by NAAC
Akola

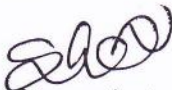
SHRI SHIVAJI COLLEGE OF ARTS, COMMERCE AND SCIENCE, AKOLA.

MINOR RESEARCH PROJECT - DEPARTMENT OF CHEMISTRY


Investigator- Dr. S. G. Bhadange

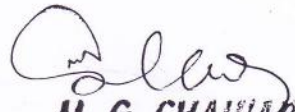
F.47-159/12 Dated -15 April 2013
Details of "the Expenditures for the year - 2013 -15
Audited Statement of Expenditures
For the year - 2013 - 14 and 2014 - 15

Sr No	Non recurring grant	Amount Expenditure	Amount Sanctioned	Recurring grant	Amount Expenditure	Amount Sanctioned
1	Books & Journal	10,035/-	10,000/-	Contingency	10,117/-	10,000/-
				Chemicals	40,317/-	40,000/-
				Travels	10,200/-	10,000/-
2	Equipments	50,000/-	50,000/-			
	Total	60,035/-	60,000/-	Total	60,634/-	60,000/-
	Grant Total	Recurring & nonrecurring		1,20,669/-	Sanctioned	1,20,000/-


Principal Investigator
Dr. S. G. Bhadange]




PRINCIPAL
Shri Shivaji College of Arts,
Commerce & Science, AKOLA.
A Grade CGPA 3-II, By NAAC
Akola


M. G. CHAWARE
CHARTERED ACCOUNTANTS
M. No. 32803



MINOR RESEARCH PROJECT OF DR.S.G.BHADANGE -2013-15.


DEPARTMENT OF CHEMISTRY

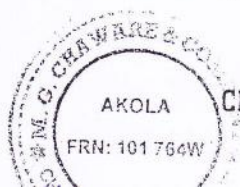
Investigator - Dr.S.G.Bhadange

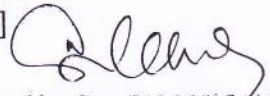
F.47-159/12(WRO) Dated -15 April 2013 Date of Implementation- 01 July 2013

BOOKS.

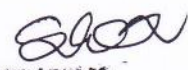
Sr No.	Grants	Voucher No	Purchased From whom	Bill No. & Date	Particulars /Description	Amount in Rs
i	Books & Journals	1	Books Emporium Akola	5714 & 27/09/2013	Elements of Physical Chemistry By Puri	385/-
					Principals of Physical Chemistry By Puri	535/-
					Natural Products Vol. II By O.P.Agrawal	350/-
					Organic Chemistry of Natural Products Vol. I By Chatwal	350/-
					Organic Chemistry of Natural Products Vol.II By Chatwal	350/-
					Advance Organic Chemistry Vol. I and Vol. II By S.K. Ghosh	850/-
					Organic Chemistry By Morrison	875/-
					Stereochemistry By P.S. Kalsi	295/-
					Organic Synthesis By J. Sing	455/-
					Ad. Organic Chemistry	425/-
					Concise Inorganic Chemistry By Lee	700/-
					Physical Chemistry By Bhal (2 copies)	1,590/-
					Ad. Organic Chemistry (2 copies)	2,390/-
					Ad. Inorganic Chemistry Vol. I By Madan	650/-
					Ad. Inorganic Chemistry Vol. II By Madan	450/-
Spectroscopy By Y.R. Sharma	500/-					
Rs. Ten thousand Thirty five only					Total	Rs.10,035/-


Principal Investigator
Dr. S. G. Bhadange]




M. G. CHAWARE
CHARTERED ACCOUNTANTS
M. No. 32803




PRINCIPAL
Sri Shivaji College of Arts,
Commerce & Science, AKOLA.
A Grade C. GPA. 3.11, by NAAC
AKOLA

**SHRI SHIVAJI COLLEGE OF ART'S, COMMERCE & SCIENCE AKOLA
LIBRARY DEPARTMENT**

Date- 22-8-2015

ACCESSION CERTIFICATE

It is certified that the Books purchased from MRP grant are handed over to the college central library. Their Accession number is from **49757-49775**

S.G. Bhadange

Investigator

(Dr. S.G. Bhadange)

[Signature]

Librarian
LIBRARIAN
**Shri Shivaji College of Arts
Commerce & Science
AKOLA**

S.G. Bhadange

Principal

Shri Shivaji College, of Arts,
Commerce & Science, AKOLA.
A Grade C, GPA: 5.81, by NAAC



To,

The Principal,
Shri Shivaji College of Arts,
Commerce and Science,
Akola.

Ref :- MRP of Dr. S. G. Bhadange F. No.47-159/12 (WRO), Dated 15.04.2013.

Subject :- Submission of final expenditure of above MRP.

Respected Sir,


I am submitting herewith actual expenses incurred against MRP sanctioned by UGC for 2013-2014 and 2014-2015 vide its letter F. No. 47-159/12 (WRO), Dated 15.04.2013.

Following is the summary of actual expenditure.


Sr No	Type of Grant	Particulars	Amount Sanctioned	Advance	Expenditure	Sanctioned expenditure	Actual Total expenditure
1	Non-Recurring grant	Books	10,000/-	10,000/-	10,035/-	10,000/-	10,035/-
		Equipment	50,000/-	50,000/-	50,000/-	50,000/-	50,000/-
2	Recurring grant	Contingency	10,000/-	05,000/-	5,499/-	10,000/-	10,117/-
		Special Needs	Nil	Nil	Nil	Nil	Nil
		Travel/Field work	10,000/-	5,000/-	4910/-	10,000/-	10,200/-
		Chemicals	40,000/-	20,000/-	20,007/-	40,000/-	40,317/-
		Extension Activities	Nil	Nil	Nil	Nil	Nil
Total :-			1,20,000/-	90,000/-	90,451/-	1,20,000/-	1,20,669/-

Advance against my name is 30,000/- (Rs. Thirty thousand only) for which I am submitting the actual expenditure of the same, hence it should be nullified against my name.

Actual sanctioned	1,20,000/-
Total expenditure	1,20,669/-
Expenditure may be sanctioned	1,20,000/-
Sanctioned expenditure	1,20,000/-
Advance paid to me for MRP expenditure	90,000/-
Refund to UGC a per Utilization Certificate	Nil
Balance amount to be paid to me as per Utilization Certificate	30,669/-


Principal Investigator
Dr. S. G. Bhadange]




Principal
Shri Shivaji College of Arts,
Commerce and Science, Akola,
A Grade C. GPA 3.11, by NAAC
Akola

MINOR RESEARCH PROJECT OF DR.S.G.BHADANGE -2013-15.

DEPARTMENT OF CHEMISTRY

Investigator - Dr.S.G.Bhadange

F.47-159/12(WRO) Dated -15 April 2013 Date of Implementation- 01 July 2013

Sr No.	Grants	Voucher No	Purchased From whom	Bill No & Date	Particulars /Description	Amount in Rs
ii	Contingency	2	Prime Computer Services, Akola	12/08/2013	Quick Heal Antivirus	1,500/-
		3		21/03/2014	HP Original Toner Cartridge	3,999/-
		4		07/06/2014	Tone Refilling	300/-
					OCR Drum	350/-
					PCR Roller	340/-
		5		09/10/2014	Pen Drive 16 GB	900/-
		6		14/12/2014	DVD Disk R/W (18)	900/-
		7	22/01/2015	HP Printer Taflon Film	980/-	
		8	1080 & 10/02/2015	Ex Bond Paper (1 rim)	340/-	
				Transparent Tape	070/-	
				Gum Bottle	078/-	
9	1079 & 10/02/2015	Paper A4 (1 rim)	170/-			
		Paper Legal Size (1 rim)	190/-			
Total Amount of Rs. Ten Thousand One Hundred Seventeen only					Total	10,117/-

S.G.B.
Principal Investigator
Dr. S. G. Bhadange]



S.G.B.
Principal
Shri Shivaji College of Arts,
Commerce & Sciences, Akola,
A Grade C. GPA. 3.01, by NAAC



M.G.C.
M. G. CHAWARE
CHARTERED ACCOUNTANTS
M. No. 32803

MINOR RESEARCH PROJECT OF DR.S.G.BHADANGE -2013-15.

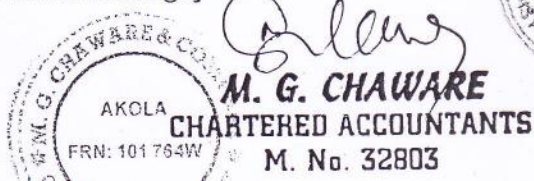
DEPARTMENT OF CHEMISTRY

Investigator - Dr.S.G.Bhadange

F.47-159/12(WRO) Dated -15 April 2013 Date of Implementation- 01 July 2013

Sr No	Grants	Voucher No	Travel Rout	Bill No & Date	Particulars /Description	Amount in Rs
iii	Field work & Travels	10	Akola-Akot [Travel & other Charges]	16/08/2013	To collect water sample for MRP	1,130/-
		11	Akola-Patur [Travel & other Charges]	20/10/2013	To collect water sample for MRP	860/-
		12	Akola-Murtizapur [Travel & other Charges]	28/12/2013 to 29/12/2013	To collect water sample for MRP	1,260/-
		13	Akola-Balapur [Travel & other Charges]	10/03/2014 to 11/03/2014	To collect water sample for MRP	1,660/-
		14	Akola-Telhara [Travel & other Charges]	05/07/2014	To collect water sample for MRP	1,180/-
		15	Akola-Mhaisang [Travel & other Charges]	25/09/2014	To collect water sample for MRP	680/-
		16	Akola-Barshitakli [Travel & other Charges]	12/12/2014	To collect water sample for MRP	820/-
		17	Akola-Mana [Travel & other Charges]	16/01/2015 to 17/01/2015	To collect water sample for MRP	1,590/-
		18	Akola-Hiwarkhed [Travel & other Charges]	22/03/2015	To collect water sample for MRP	920/-
Total amount of Rs. Ten thousand Two Hundred only						10,200/-

S.G.B.
Principal Investigator
Dr. S. G. Bhadange]



S.G.B.
PRINCIPAL
Shri Shivaji College of Arts,
Commerce & Science, AKOLA,
A Grade C. GPA. 3.11 by NAAC
Akola

MINOR RESEARCH PROJECT OF DR.S.G.BHADANGE -2013-15.

DEPARTMENT OF CHEMISTRY

Investigator - Dr.S.G.Bhadange

F.47-159/12(WRO) Dated -15 April 2013 Date of Implementation- 01 July 2013

EQUIPMENTS.

Sr No	Grants	Voucher No	Purchased From whom	Bill No & Date	Particulars / Description	Rate in Rs	Amount in Rs	
iv	Equipments	19	Shree Ganesh Scientific Syndicate, Amravati.	148/13-14 & 30/11/13	Digital Potentiometer, EQ-601/ Equiptronics [1pic.]	5,400/-	5,400/-	
					Glass Electrode/ Equiptronics [2 Nos.]	575/-	1,150/-	
					Silver Electrode / Equiptronics [2 Nos.]	650/-	1,300/-	
							Total	Rs. 7,850/-
		20	Shree Ganesh Scientific Syndicate, Amravati.	162/13-14 & 30/11/13	Digital Conductivity Meter, EQ-660A/ Equiptronics	8,100/-	8,100/-	
					Digital Photoelectric Colorimeter, EQ-650/ Equiptronics	8,272/-	8,272/-	
							Total	Rs. 16,372/-
21	Shree Ganesh Scientific Syndicate, Amravati.	178/13-14 30/11/13	Digital Polarimeter, EQ-801 Equiptronics	25,778/-	25,778/-			
Total :- Rs. Fifty thousand only					Total	Rs. 50,000/-		

Principal Investigator
Dr. S. G. Bhadange]



Principal
Shri Shiyali College of Arts,
Commerce & Science, AKOLA.
A Grade C. GPA. 3.11, by NAAC
Akola

M. G. CHAWAKE
CHARTERED ACCOUNTANTS
M. No. 32803



MINOR RESEARCH PROJECT OF DR.S.G.BHADANGE -2013-15.

DEPARTMENT OF CHEMISTRY

Investigator - Dr.S.G.Bhadange

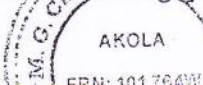
F.47-159/12(WRO) Dated -15 April 2013 Date of Implementation- 01 July 2013

CHEMICALS.

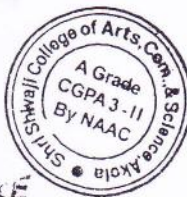
Sr No	Grants	Voucher No	Purchased From whom	Bill No. & Date	Particulars/Description	Rate in Rs	Amount in Rs
v	Chemical	22	Shree Ganesh Scientific Syndicate, Amravati.	168/13-14. & 26/11/2013	Diethyl Ether [500ml x 5]	260/-	1,300/-
					Dimethyl Formamide [500ml x 2]	201/-	402/-
					Dimethyl Glyoxime [100gm]	329/-	329/-
					Ethyl Acetate [500ml x 3]	172/-	516/-
					Ethyl Bromoacetate [250ml]	1704/-	1,704/-
					Glycerol [500ml x 3]	229/-	687/-
					Guanadine Nitrate [250gm]	225/-	225/-
					Hydrazine Hydrate [500ml]	706/-	706/-
					Hydrazine Hydrochloride [100gm]	195/-	195/-
					Hydrochloric Acid [5lit. x 8]	494/-	3,952/-
					Total	Rs. 10,016/-	
		23	Shree Ganesh Scientific Syndicate, Amravati.	214/14-15. & 11/02/2015	Acetone [2.5 lit. x 4]	820/-	3,280/-
	Aniline [500ml x 5]				355/-	1,775/-	
	Bromine [5 x 5 x 20ml]				783/-	3,915/-	
	Benzene [2.5 lit. x 2]				1235/-	2,470/-	
					Total	Rs. 11,440/-	
		24	Shree Ganesh Scientific Syndicate, Amravati.	217/14-15 & 11/02/2015	Chloroform [2.5lit x 4]	859/-	3,436/-
	Petroleum Ether, 60-80 [2.5 lit. x 3]				738/-	2,214/-	
	Pyridine [500ml x 4]				620/-	2,480/-	
	Maltose [500gm x 1]				740/-	740/-	
					Total	Rs. 8,870/-	
	Glass Wares	25	Shree Ganesh Scientific Syndicate, Amravati.	167/13-14 & 26/11/2013	Basint Porcelin, 3"	17/-	1,241/-
					Beaker, 50ml	30/-	750/-
					Beaker, 100ml	31/-	1,240/-
					Beaker, 500ml	71/-	5,680/-
					Beaker, 2000ml	270/-	1,080/-
					Total	Rs. 9,991/-	
						Total	Rs.40,317=00/-

Forty thousand Three Hundred Seventeen only.

Principal Investigator
Dr. S. G. Bhadange



M. G. CHAVHAN
CHARTERED ACCOUNTANTS



Principal
Shri Shivaji College of Arts,
Commerce & Science, AKOLA.
A Grade C. GRA. 3.11, By NAAC
Akola

ACCESSION CERTIFICATE.

It is certified that the Books purchased from MRP grant are handed over to the college central / departmental Library. Their Accession number is from..... To

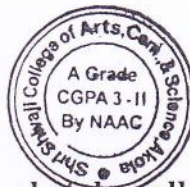
[Handwritten Signature]

PRINCIPAL
Shri Shivaji College of Arts,
Shri Shivaji College of Science, AKOLA,
Command Camp, Science, Akola,
CGPA: 3.11, by NAAC

Librarian

[Handwritten Signature]

Principal Investigator



Seal of the college

MINOR RESEARCH PROJECT OF DR. S.G.BHADANGE -2013-014.

DEPARTMENT OF CHEMISTRY


INVESTIGATOR - DR. S.G.BHADANGE.


File No.47-159/12(WRO). Dated :- 13rd April-2013. Date of Implementation
- 1st July 2013

ASSETS CERTIFICATE

It is certified that the following Equipment have been handed over to the college

Sr.No.	Equipment	Quantity
01	Digital Potentiometer. EQ-601 (Equiptronics)	01.Pic
02	Glass Electrode, (Equiptronics)	02.Pic
03	Silver Electrode, (Equiptronics)	01.Pic
04	Digital Conductivity Meter, EQ-660A, (Equiptronics)	01.Pic
05	Digital Photoelectric Colorimeter, EQ-650, (Equiptronics)	01.Pic
06	Digital Polarimeter, EQ-801, (Equiptronics)	01.Pic


Principal Investigator
Dr. S. G. Bhadange]


PRINCIPAL
Shri Shivaji College of Arts,
Commerce & Science, AKOLA.
Grade C. GPA. 3.11, by NAAC
Akola


(Dr. Z. H. Khan)
Co-ordinator RAC
Shri. Shivaji College, Akola



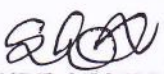
Seal of the college

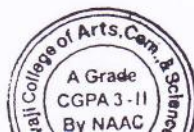
FINAL REPORT OF THE WORK DONE ON THE MINOR RESEARCH PROJECT.

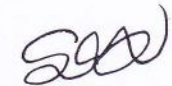
1. Project report Final
2. UGC Reference No.F.47-159 / 12 (WRO), Dated -15th April 2013.
3. Period of report: from -2013 to 2015
4. Title of research project "**Studies on Incidence and Extent of Pesticide Residues in Natural Water Reservoirs in Akola Dist. Of Vidarbha Region (Maharashtra)**"
5. (a) Name of the Principal Investigator – Dr. S. G. Bhadange.
(b) Department and University / College where work has progressed - Department Of Chemistry, Shri Shivaji College of Arts, Commerce & Science, Akola.
6. Effective date of starting of the project- 01st July 2013.
7. Grant approved and expenditure incurred during the period of the report:
 - (a) Total amount approved Rs. 1,20,000/- Sanctioned for first Installment Rs.90,000 /-
 - (b) Total expenditure Rs. 1,20,669/-

REPORT OF THE WORK DONE : PLEASE SEE APPENDIX- A.

- (i) Brief objective of the project: - Studies on Incidence and Extent of Pesticide Residues in Natural Water Reservoirs in Akola Dist. Of Vidarbha Region (Maharashtra)
- ii. Work done so far and results achieved and publications, if any, resulting from the work (Give details of the papers and names of the journals in which it has been published or accepted for publication):
Nil
- (iii) Has the progress been according to original plan of work and towards achieving the Objective? If not, state reasons. - **Yes.**
- (iv) Please indicate the difficulties, if any, experienced in implementing the Project – Nil
- (v) If project has not been completed, please indicate the approximate time by which it is likely to be completed. A summary of the work done for the period (Annual basis) may please be sent to the Commission on a separate sheet: - **[Please see Appendix-A]**
- vi. If the project has been completed, please enclose a summary of the findings of the Study. **Two bound copies of the final report of work done may also be sent to the Commission [Please see Appendix-A]**
- vii. Any other information which would help in evaluation of work done on the project. At the completion of the project, the first report should indicate the output, such as
 - (a) Manpower trained
 - (b) Ph. D. awarded
 - (c) Publication of results (d) other impact, if any **NIL**


SIGNATURE OF THE PRINCIPAL
INVESTIGATOR
[Dr.S.G.Bhadange]




PRINCIPAL
[Dr.S.G.Bhadange]

UGC MINOR RESEARCH PROJECT

FINAL PROGRESS REPORT

Title :

**“Studies on Incidence and Extent of Pesticide Residues in Natural
Water Reservoirs in Akola.
Distt. Of Vidarbha Region (Maharashtra)”**

**For the year- 2013 -15
No.F.47-159/12 (WRO) Dated -15th April 2013**

Date of implementation- 01st July 2013

Name of Principal Investigator

Dr. S. G.Bhadange

Department of Chemistry.

**SHRI SHIVAJI COLLEGE OF ARTS, COMMERCE AND SCIENCE,
AKOLA. (M. S.)**

July 2015

UNIVERSITY GRANTS COMMISSION
WESTERN REGIONAL OFFICE
GANESHKHIND, PUNE - 411007

File No: 47-159/12(WRO)

The Accounts Officer
University Grants Commission
Ganeshkhind, Pune-411007.

Hon'ble Dr. S. G. Bhadange
Principal
Shri Shivaji College of Arts,
Commerce & Science, AKOLA.

Phones: (020) 25696897,
25691477, 25691178,
Fax: (020) 25691477
Web site: www.ugc.ac.in

21 15/3/12
40 2012

Subject: Financial assistance to college teachers for undertaking Minor Research Projects -
Release of first installment during XIIth Plan.

Sir/Madam,

The UGC on the recommendations of the Expert Committee has approved the Minor Research Project in the subject of Chemistry entitled "Studies on Incidence and Extent of Pesticide Residues in Natural Water Reservoirs in Akola Dist. Of Vidarbha Region (Maharashtra)" to be undertaken by Dr. Bhadange S. G. of SHRI SHIVAJI COLLEGE OF ARTS COMMERCE & SCIENCE, NEAR SHIVAJI PARK, AKOLA, AKOLA-444 001. The financial assistance of the UGC would be limited to Rs. 120000/- (Rupees Only) for a period of two years. An amount of Rs. 90000/- (Rupees Only) is presently being sanctioned as the first installment.

Non-Recurring Grant for Two years	Amount (Rs)	Recurring grant	1 st Year Amount	2 nd Year Amount	Head of a/c
Books & Journals	10000	Contingency	5000	5000	4(iv)b (For General) 1.B(i)h(i)b (For SC) 1.B(i)h(i)b (For ST)
Equipment	50000	Special Need	0	0	
		Travel/Field work	5000	5000	
		Chemicals & Glassware	20000	20000	
		Others	0	0	
Total (Rs.)	60000		30000	30000	

Total amount for the project: Rs. 120000/-

The grant is subject to the terms and conditions as mentioned below.

1. A Certificate of Acceptance of the conditions governing the research project should be sent immediately to this office.
2. The amount of the grant shall be drawn by the Accounts Officer (D.D.O), University Grants Commission on the grant-in-aid bill and shall be disbursed to and credited to the above-mentioned institute through D.D./ RTGS Confirmation No/ NEFT/ Transfer No.
3. The sanctioned amount is debatable to the Major Head 4(iv)b (For General), 1.B(i)h(i)b (For SC), 1.B(i)h(i)b (For ST) and is valid for payment during the financial year 2012 -2013 only.
4. The grant is subject to adjustment on the basis of Utilization Certificate in prescribed proforma submitted by University/College/Institute.

NOTE:

1. The grant shall not be used self-financial/ non-grant/unaided courses & teachers.
2. Date of implementation will be the date of sanction of first installment.
3. The researcher is required to submit an Acceptance Certificate of the project in the enclosed format to the affiliating university, which would then be sent to UGC (WRO) in a bunch by the University.



4. Please send one copy of the project completion report to Director, INFLIBN Gujarat University Campus, Navrangpura, Ahmedabad for record.
5. The statement of expenditure incurred and brief academic progress report relating to the above project is to be sent in the prescribed format to this office after completion of one year. Audited utilization certificate of full-allocated amount, audited statement of expenditure and final project report be submitted immediately after completion of the project.
6. The assets acquired wholly or substantially out of UGC grant shall not be disposed off or encumbered or utilized for purposes other than those for which the grant was given, without proper sanction of the UGC, Western Regional Office, Pune- 07 and should at any time the college cease to function, such assets shall revert to U.G.C.
7. A register of the assets acquired wholly or substantially out of the grant shall be maintained by the University/College in the prescribed form.
8. The University/College shall strictly follow all the instructions issued by the Govt. of India from time to time with regard to reservation of posts for SC/ST/OBC.
9. The interest earned by the University/College/Institute will be treated as additional grant and it is required to be incorporated in the U.C./Statement of Expenditure submitted to UGC, (WRO).
10. The University/College shall fully implement the office Language Policy of the Union Govt. and comply with the official Language Act, 1963 and Official language (use for official purposes of the Union) Rules, 1976 etc.
11. The sanction issues in exercise of the delegation of powers vide Commission office order No.5/92 dated may.01, 1992.
12. The funds to the extent are available under the scheme.
13. The grantee institution shall ensure the Utilization of grants-in-aid for which it is being sanction./paid. In case non-utilization/ part utilization, simple interest @ 10% per annum amended from time to time on unutilized amount from the date draw/to date of refund as per provisions contained in general financial Rules of Govt. of India will be charged.

Yours faithfully,

(Dr. G. Srinivas)
Joint Secretary

Copy to:

1. THE PRINCIPAL
SHRI SHIVAJI COLLEGE OF ARTS COMMERCE & SCIENCE, NEAR
SHIVAJI PARK AKOLA, AKOLA -444 001.
2. DR. BHADANGE S. G., SHRI SHIVAJI COLLEGE OF ARTS
COMMERCE & SCIENCE NEAR SHIVAJI PARK, AKOLA, AKOLA -
444 001.
3. DIRECTOR (BCUD), SANT GADGE BABA AMRAVATI UNIVERSITY,
AMRAVATI, AMRAVATI- 444602
4. DIRECTOR, HIGHER EDUCATION, CENTRAL BLDG, PUNE
5. ACCOUNTANT GENERAL, MAHARASHTRA STATE, MUMBAI
6. GUARD FILE.

(Dr. G. Srinivas)
Joint Secretary

UNIVERSITY GRANTS COMMISSION
WESTERN REGIONAL OFFICE
GANESHKHIND, PUNE - 411 007.

Phones: (020) 25691477
25691178, 2569689
Fax: (020) 2569147

Web site: www.ugc.ac.in

By Registered Post

F. No. 47-159/12(WRO)

June 14, 2013

THE PRINCIPAL,
SHRI SHIVAJI COLLEGE OF ARTS
COMMERCE & SCIENCE, NEAR SHIVAJI
PARK,
AKOLA,
AKOLA - 444 001.

Subject: Release of grant through D D. No. / RTGS Confirmation No./ NEFT/ Transfer No.

Sir/Madam,

Please find enclosed D.D.No./ RTGS Confirmation No/ NEFT/ Transfer No. pertaining to release of grant-in-aid to your college as per following details:

- P.I.: - Dr. Bhadange S. G.
- Sanction letter reference: - 47-159/12(WRO), Dated 20.02.13
- Name of the Scheme: - MRP (Science)
- Bank Name: - Bank of Baroda
- D D. No. / RTGS Confirmation No./ NEFT/ Transfer No. : - BARBH13113223353
- Dated: - 23.04.13
- Amount: - Rs. 90000/-

Kindly acknowledge of this letter.

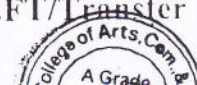
Yours faithfully

Sd/
(Accounts Office)

(Since it is a computer-generated letter, signature is not necessary)

Encl: Acknowledgement

ACKNOWLEDGEMENT FOR THE GRANTS RECEIVED FROM UGC (WRO), PUNE
(to be returned immediately on receipt of (DD No./RTGS Confirmation No./NEFT/Transfer No.



Minor Research PROJECT

COMPLETION REPORT

From 01/07/2013 to 02/07/2015

Principal Investigator: - Dr. S. G. Bhadange

UGC File No.F.47-159/12 Dated – 15 April 2013

Title: - "STUDIES ON INCIDENCE AND EXTENT OF PESTICIDE RESIDUES IN NATURAL WATER RESERVOIRS IN AKOLA DISTRICT ON VIDARBHA REGION (MAHARASHTRA)"

Amount Sanction: - 1, 20, 000/-

Introduction: -

Pesticide is a substance intended for preventing, destroying, repelling or migrating pests. A substance intended for use as plant growth regulator, defoliant or desiccant is also classified as pesticide. Pesticide is classified into insecticides, fungicides, herbicides or weedicides, acaricides, nematicides based on the target pest. They are classified into five groups based on their structure viz, Organochlorine, organophosphate, carbamate, pyrethroids and others. Organochlorine pesticides are hydrocarbon that contain chlorine atoms and most of them are highly persistent, carcinogenic and mutagenic. DDT, DDE, Endosulphone, Lindane, Heptachlore, Chlorodane belong to this group. Recent reports of increased incidence of abnormal development of testis and reproductive capabilities related to exposure of environmental chemical have are used a great concern. The male reproductive system may be affected via different mechanism. The pesticides adversely affect spermatogenesis and cause testicular atrophy and fetotoxicity. Pesticides chemical like DDT, dieldrin and polycyclic hydrocarbon have been reported to alter the level of testosterone and to decrease the reproductive ability. Impotency in farm workers on exposure to pesticides has also been reported. Epidemiological studies have confirmed that women married to men exposed to DBCP and chloropyrene have higher rate of abortions. Due to these injurious effects, many of the highly toxic chlorinated hydrocarbon pesticides have been banned in the United States, Still these chemicals persists as environmental contaminants and are in wide spread use in developing countries.

Akola is tribal, rural district of Vidharbha region of Maharashtra. Major agriculture produce is Cotton, capsicum and Soybean. This district is a top grower of cotton and Soybean. Eventually,

the illiterate tribal farmers use huge amounts of pesticides in their cotton and Soybean fields. It results into percolation of large quantities of these hazardous chemicals in natural water reservoirs as well as milk producing animals like cow, buffalo etc.

Method & Material:-

a) Extraction of pesticide residues from natural water reservoirs:

One liter water will be taken from each of randomly selected natural water reservoirs from various Tahelis of the district during two seasons of the year. Each of the sample water flasks will be added with 10-15 gm of sodium chloride and the mixture will be stirred gently. The solution will be transfer in to a 2liter reparatory funnel followed by addition of 60ml methylene chloride. The funnel will be stoppard and shaken for three minutes, the lower dichloromethane layer will be separated from the upper water layer and the lower organic layer is drained through granular sodium sulphate (abiut 20g) into a 250ml conical flask. The extraction will be repeated twice more and the extracts will be combined. The dichloromethane will be evaporator under vacuum and the volume will be reduced to 1 ml. The mixture will transferred into a graduated tube using acetone (5ml) and the solvent will be evaporated just to dryness. The volume will be made up to 1 ml and will be stored into an auto sampler vial. Internal standard will be added and stored at 5⁰C in a freezer until analyzed.

b) For HPLC –Fluorescence detection.

Result:-

Results from the study have been shown in table which is carried out in the seasons Rainy 2013, Summer & Rainy 2014 from the various dams and rivers of different tahasil of Akola district viz. Akola, Akot, Telhara, Balapur, Murtizapur, Barshitakli and Patur. The results are related to the concentration of OC residues in water. The associated figure for mean concentration for pesticide DDT was in the range of 0.01-0.05 µg/L. The pesticides chlorodane, Lindane and heptachlor was not detected in the water samples showing that the farmers around the reservoir do not use them in their farming activities. Endosulfan, a broad spectrum contact insecticide and acaricide, is another pesticide used by many farmers. The associated figure for mean concentration of Endosulfan was in the range of 0.01-0.02 µg/L.

Results:

Area	Dams/Rivers	Season	DDT	DDE	Endosulfan	Chlorodane	Heptachlor
Akola	Borgaon Lake (Local Nallah)	Rainy 2013	0.02	0.05	0.01	ND	ND
		Summer 2014	0.04	0.04	0.01	ND	ND
		Rainy 2014	0.03	0.02	0.02	0.01	ND
	Masa Dam (Local Nallah)	Rainy 2013	0.03	0.05	0.01	ND	ND
		Summer 2014	0.05	0.04	0.02	ND	ND
		Rainy 2014	0.02	0.03	0.01	0.01	0.01
	Sisaudegaon Dam (Local Nallah)	Rainy 2013	0.04	0.04	0.01	ND	ND
		Summer 2014	0.03	0.02	ND	ND	ND
		Rainy 2014	0.05	0.02	0.01	0.01	ND
Akot	Popatkhed Dam (Dather River)	Rainy 2013	0.09	0.03	0.04	ND	ND
		Summer 2014	0.03	0.05	0.02	ND	ND
		Rainy 2014	0.02	0.01	0.04	0.01	ND
	Chinchpani Dam (Local Nallah)	Rainy 2013	0.05	0.04	0.03	ND	0.02
		Summer 2014	0.08	0.03	0.03	ND	0.01
		Rainy 2014	0.03	0.02	0.02	ND	ND
	Bhilkhed Dam (Local Nallah)	Rainy 2013	0.05	0.02	0.03	0.01	ND
		Summer 2014	0.04	0.01	0.03	ND	0.01
		Rainy 2014	0.06	0.03	0.05	0.01	ND
Balapur	Balapur dam (Mun River)	Rainy 2013	0.05	0.01	0.01	ND	0.01
		Summer 2014	0.04	0.03	0.03	0.01	0.01
		Rainy 2014	0.04	0.05	0.02	0.01	ND
Murtizapur	Shivankhurd Dam (Local Nallah)	Rainy 2013	0.02	0.05	0.03	0.01	ND
		Summer 2014	0.01	0.02	0.05	ND	ND
		Rainy 2014	0.02	0.01	0.02	ND	ND
	Uma Dam (Uma River)	Rainy 2013	0.03	0.03	0.03	0.01	ND
		Summer 2014	0.01	0.04	0.02	0.02	ND
		Rainy 2014	0.05	0.02	0.01	0.02	0.01
	Katepurna	Rainy 2013	0.06	0.04	0.03	ND	0.01

Barshitakli	Dam (Katepurna River)	Summer 2014	0.04	0.05	0.03	ND	ND
		Rainy 2014	0.02	0.02	0.02	0.01	ND
	Hatola Dam (Local Nallah)	Rainy 2013	0.05	0.05	0.01	ND	0.01
		Summer 2014	0.03	0.02	0.03	ND	0.01
		Rainy 2014	0.04	0.02	0.03	0.01	ND
	Januna Dam (Local Nallah)	Rainy 2013	0.02	0.03	0.03	ND	ND
		Summer 2014	0.03	0.02	0.03	ND	ND
		Rainy 2014	0.04	0.01	0.04	0.01	ND
	Patur	Tuljapur Dam (Local Nallah)	Rainy 2013	0.05	0.05	0.04	0.01
Summer 2014			0.06	0.06	0.02	0.02	ND
Rainy 2014			0.04	0.07	0.07	0.01	ND
Patur Dam (Local Nallah)		Rainy 2013	0.05	0.04	0.05	ND	ND
		Summer 2014	0.02	0.05	0.02	0.01	0.01
		Rainy 2014	0.04	0.07	0.05	ND	ND
Nirguna Dam (Nirguna River)		Rainy 2013	0.05	0.08	0.08	ND	ND
		Summer 2014	0.02	0.05	0.05	0.01	0.02
		Rainy 2014	0.06	0.02	0.06	0.01	ND
Telhara	Wan/Wari/Hanuman Sagar (Wan River)	Rainy 2013	0.05	0.02	0.05	ND	ND
		Summer 2014	0.01	0.05	0.03	0.01	ND
		Rainy 2014	0.05	0.05	0.02	ND	0.01

Conclusion:

From the observed result we concluded that the water of all these areas of Akola district contains less amount of pesticide so water is suitable for domestic as well as agricultural purpose and also for drinking purpose after some treatment. Along with this pesticide analysis we also analyzed some physico-chemical parameters and this parameter in the limit of drinking water standards of BIS and WHO.



Dr. S. G. Bhadange
Principal Investigator