

CERTIFICATE

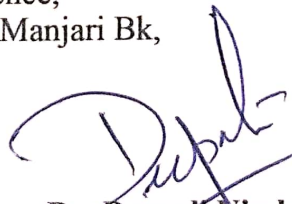
This is to certify that, the dissertation entitled "Study of Effluent Treatment Plant designing with inclusion of zero liquid discharge at Sigma Electric Manufacturing Pvt Ltd; Chakan" submitted in partial fulfillment of the degree of "MASTER OF SCIENCE" in "ENVIRONMENTAL SCIENCES" at Vasantdada Sugar Institute, Manjari Bk., Pune, Maharashtra, is a record of bonafide research work carried out by Mr. Abhijeet L. Mishra under my supervision and guidance.



Mr. Vikram Deshmukh
(Co-guide)
Scientific Officer
Dept. of Environmental Science,
Vasantdada Sugar Institute, Manjari Bk,
Pune



Mr. Vikas Jagtap
(Guide)
Sr. Manager – EHS Dept.
Sigma Electric Mfg. Corp. Ltd;
Chakan



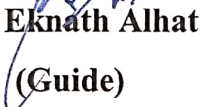
Dr. Deepali Nimbalkar
Sr. Scientist & Head
Dept. of Environmental Science,
Vasantdada Sugar Institute, Manjari Bk, Pune



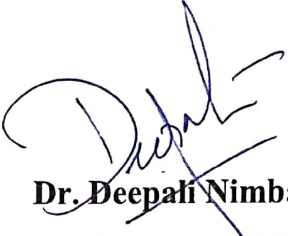
Principal
Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli,
Dist. Pune - 412 307

CERTIFICATE

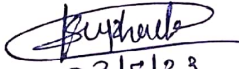
This is to certify that, **Mr. Bhushan Lahurao Madake** has successfully completed research project '**To study the characteristics and quality of CPU treated Sugar Condensate through RO**' under my guidance and supervision, and submitted the project as laid down by Department of Environmental Sciences, Vasantdada Sugar Institute, Manjari. The material that has been obtained from other sources is duly acknowledged in the dissertation.


Dr. Eknath Alhat
(Guide)
Scientist

Dept. of Environmental
Science,
Vasantdada Sugar Institute,
Manjari, Pune.


Dr. Deepali Nimbalkar
Sr. Scientist and Head
Dept. Of Environmental
Science,

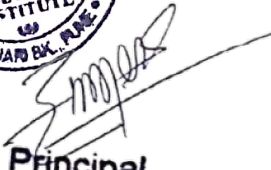
Vasantdada Sugar Institute,
Manjari, Pune.


23/5/23

Mr. Kapil Uphade
(Co- Guide)

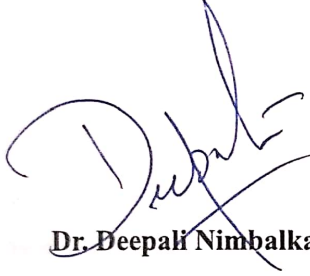
Scientific officer
Dept. of Environmental
Science,
Vasantdada Sugar Institute
Manjari, Pune.




Principal
Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli,
Dist. Pune - 412 307

CERTIFICATE

This is to certify that, the dissertation entitled “To study the characteristics of distillery evaporation condensate and reduce impurities of Wastewater by using microbial culture” submitted in partial fulfilment for the requirement of degree in Master of Sciences in Environmental Sciences of the Vasantdada Sugar Institute Manjari (BK), Pune is a record of bonafide research work carried out by **Mr. Kakade Shivraj Satish** under my guidance and supervision.



Dr. Deepali Nimbalkar

Sr. Scientist and Head,

Department of Environmental Science

Vasantdada Sugar Institute

Manjari (BK), Pune.



Dr. Eknath Alhat

(Guide)

Scientist

Department of Environmental Science

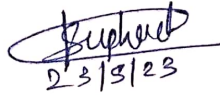
Vasantdada Sugar Institute,

Manjari (BK), Pune.



Principal

Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli,
Dist. Pune - 412 307



Upadhye

Mr. Kapil Upadhye

(Co-guide)

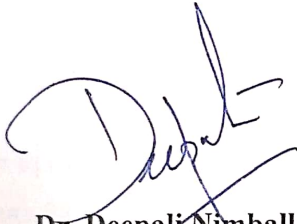
Scientific Officer

Dept. Environmental Science,

Vasantdada Sugar Institute, Manjari, Pune.

CERTIFICATE

This is to certify that the dissertation entitled “Study of wetland bird diversity and in relation to habitat characteristics of Kavdipat” submitted in partial fulfilment for the requirement of degree in master of science, of the Vasantdada Sugar Institute, a record of bonafide research work carried word by **Miss. Jambhale Madhu Sunil** under my guidance and supervision.



Dr. Deepali Nimbalkar
Scientist & Head
Department of Environmental
Science



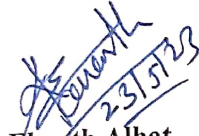
Guide
Dr. Amol B. Deshmane
Scientist
Department of Environmental
Science



Principal
Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli,
Dist. Pune - 412 307

CERTIFICATE

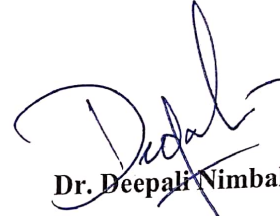
This is to certify that, Mr. JAGTAP BHAGWAN GORAKSHANATH has Successfully completed research project "COMPARATIVE STUDY OF TREATMENT ON SUGAR MILL EFFLUENT BY USING TWO DIFFERENT TYPE OF MICROBIAL CULTURE" under my guidance and supervision, and submitted the project as laid down by department of environmental sciences, Vasantdada Sugar institute, Manjari. The material that has been obtained from other sources is duly acknowledged in the dissertation. It is further certified that the work or its part has not been submitted to any other university for examination under my supervision. I consider this work worthy for the award of the degree of Master.


Dr. Eknath Alhat
(Guide)

Scientist

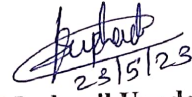
Department of Environmental Science

Vasantdada Sugar Institute Pune.


Dr. Deepali Nimbalkar
(Sr. Scientist and Head,)

Department of Environmental science

Vasantdada Sugar Institute Pune.


Mr. Kapil Upade
(Co- guide)

Scientific officer

Department of Environmental science,

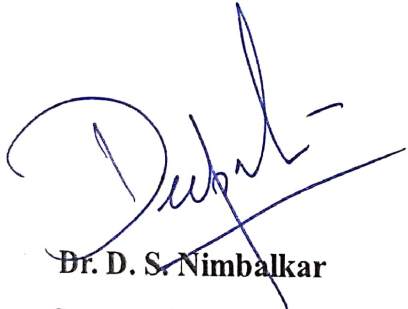
Vasantdada Sugar Institute Pune.




Principal
Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli,
Dist. Pune - 412 307

CERTIFICATE

This is to certify that the dissertation entitled "Variation in Aerosols Emissions in 2000-2014 as compared to 1950-1965 with the help of 'The Coupled Model Intercomparison Project Phase 6 (CMIP6)'" submitted in partial fulfilment for the requirement of degree in Masters of Sciences in Environmental Sciences of the Vasantdada Sugar Institute Manjari (Bk.), Pune, is a record of bonafide research work carried out by **Mr. Shreyash T. Deokate** under my guidance and supervision.



Dr. D. S. Nimbalkar

Sr. Scientist and Head,

Department of Environmental Sciences

Vasantdada Sugar Institute,

Manjari (BK), Pune

GUIDE



Ms. Priyanka B. Kad

Research Assistant

Department of Environmental Sciences

Vasantdada Sugar Institute,

Manjari (BK), Pune



Principal

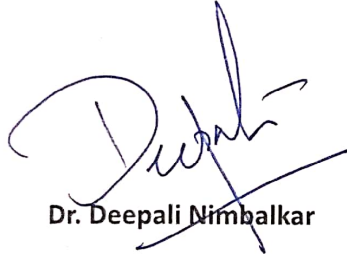
Vasantdada Sugar Institute

Manjari (Bk.), Tal. Haveli,

Dist. Pune - 412 307

CERTIFICATE

This is to certify that, the dissertation entitled “**To develop the method to dispose of the dried spent wash through brick manufacturing**” submitted in partial fulfillment for the requirement of a degree in Master of Sciences in Environmental Science of the Vasantdada Sugar Institute, is a record of bonafide research work carried out by Mr. Somesh Ramesh Gaikwad under the guidance and supervision.

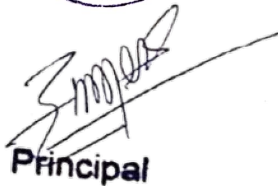
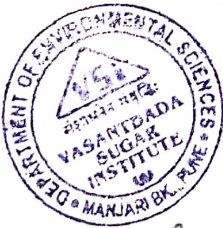


Dr. Deepali Nimbalkar

Sr Scientist & Head

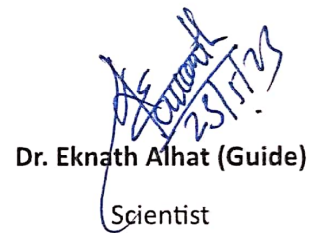
Department of Environmental
Sciences

Vasantdada Sugar Institute
Manjari, Pune



Principal

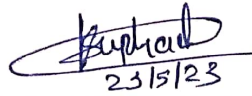
Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli,
Dist. Pune - 412 307



Dr. Eknath Alhat (Guide)

Scientist

Department of
Environmental Sciences
Vasantdada Sugar Institute



Mr. Kapil Upadhe (co-guide)

Scientific Officer

Department of Environmental
Sciences

Vasantdada Sugar Institute
Manjari, Pune

CERTIFICATE

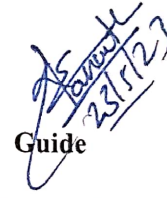
This is to certify that the dissertation entitled "Reducing the hardness & other mineral from CPU (CONDENSET POLISHING UNIT) treated sugar condenset, by using ion exchange method and treated water use for boiler purpose in sugar industry . submitted in partial fulfilment for the requirement of degree in Masters of Sciences in Environmental Sciences of the Vasantdada Sugar Institute Manjari (Bk.), Pune, is a record of bonafide research work carried out by Mr. Suraj Uttam Jadhav under my guidance and supervision. I consider this work worthy for the award of the degree of Master.



Dr. Deepali Nimbalkar

Sr. Scientist & Head

Dept. of Environmental Sciences,
Vasantdada Sugar Institute, Manjari Bk.,
Pune.



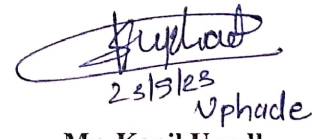
Dr. Eknath Alhat

Scientist

Dept. of Environmental Science,
Vasantdada Sugar Institute, Manjari
Bk, Pune.



Principal
Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli,
Dist. Pune - 412 307



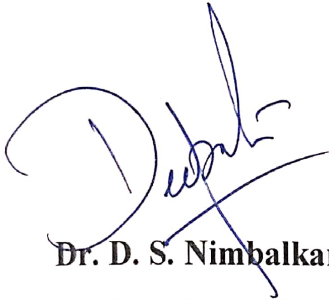
Mr. Kapil Upadhye
(Co-Guide)

Scientific Officer

Dept. Environmental Science,
Vasantdada Sugar Institute,
Manjari, Pune

CERTIFICATE

This is to certify that the project report entitled "IMPACT OF AEROSOL AND PRECIPITATION MICROPHYSICS DURING THE INTRA-SEASONAL PHASES OF INDIAN MONSOON OVER MAHABALESHWAR" submitted by Ms. Siddhi S. Garud for the partial fulfillment of M.Sc. degree in Environmental Sciences, Department of Vasantdada Sugar Institute Manjari (Bk) has been carried out by her under my supervision and guidance at the Indian Institute of Tropical Meteorology (IITM), Pune.



Dr. D. S. Nimbalkar
Sr. Scientist & Head,
Vasantdada Sugar Institute,
Manjari (Bk.), Pune-412308

Guide



18/05/23

Ms. Priyanka B. Kad
Research Assistant
Vasantdada Sugar Institute,
Manjari (Bk.), Pune-412308



Principal
Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli,
Dist. Pune - 412 307

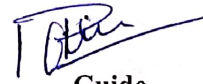
CERTIFICATE

This is to certify that, the thesis entitled 'To Evaluate the Impact of Accidentally Spilled Sugarcane Molasses on Soil and Groundwater' submitted in partial fulfillment of the requirements for the degree of Master of Science in Environmental Science of the Vasantdada Sugar Institute, is a record of bonafide research work carried out by **Miss Anisha Atmaram Patil** under my guidance and supervision.



Dr. D. S. Nimbalkar
Sr. Scientist and Head

Department of Environmental Sciences
Vasantdada Sugar Institute, Pune



Guide
(Dr. Vivek P. Patil)
Scientific Officer

Department of Environmental Sciences
Vasantdada Sugar Institute, Pune



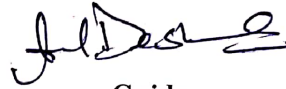
Principal
Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli,
Dist. Pune - 412 307

CERTIFICATE

This is to certify that the work presented in the project work entitled, "Use of *Chlorella Vulgaris* for the treatment of Sugar Mill Effluent and harvested biomass to produce Hydrogen" has been carried out by Miss. Ujwala Hanmant Salunkhe MSc. Semester IV student of Environmental Science from Vasantdada Sugar Institute, at the Department of Environmental Science under my guidance. She has worked for the project period from February to May 2023.



Dr. Deepali Nimbalkar
Scientist & Head
Department of Environmental
Science



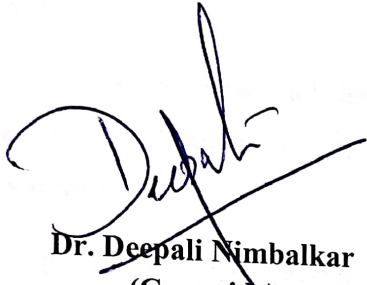
Guide
Dr. Amol B. Deshmane
Scientist
Department of Environmental
Science



Principal
Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli,
Dist. Pune - 412 307

CERTIFICATE

This is to certify that, the dissertation entitled 'Carbon Footprint Study at Fiat India Automobile Pvt. Ltd.' submitted in partial fulfilment for the requirement of degree in Master of Sciences in Environmental Sciences of the Vasantdada Sugar Institute, is a record of bonafide research work carried out by Ms. **Shelke Pratiksha Digambar** under my guidance and supervision.




Dr. Deepali Nimbalkar
(Co- guide)

Sr. Scientist & Head

Dept. of Environmental Sciences,

Vasantdada Sugar Institute, Manjari Bk., Pune



Mr. Pradeep Patil
(Guide)

Divisional Manager,

EHS Department- Fiat India
Automobile Pvt. Ltd. Ranjangaon

FIAT INDIA AUTOMOBILES PVT. LTD
B-19, M.I.D.C., Ranjangaon,
Tal. Shirur, Dist. Pune- 412220



Mr. Vikram Deshmukh,
(Co-Guide)

Scientific Officer

Dept. Environmental Science,

Vasantdada Sugar Institute, Manjari, Pune



Principal

Vasantdada Sugar Institute

Manjari (Bk.), Tal. Haveli,

Dist. Pune - 412 307

CERTIFICATE

This is to certify that the project report entitled "THE SEASONAL VARIABILITY OF BLACK CARBON OVER A SEMI-URBAN REGION IN GARHWAL HIMALAYAS" submitted by Ms. Dipali S. Thorat for the partial fulfillment of **M.Sc. degree in Environmental Sciences**, Department of Environmental Sciences, Vasantdada Sugar Institute Manjari (Bk) has been carried out by her under my supervision and guidance at the Indian Institute of Tropical Meteorology (IITM), Pune.

Guide

Dr. Abhilash Panicker
12/05/2023.

Dr. Abhilash Panicker
Scientist 'E'

Indian Institute of Tropical Meteorology
Pashan, Pune – 411008.

Co-Guide

Priyanka B. Kad
18/05/23

Ms. Priyanka B. Kad
Research Assistant
Vasantdada Sugar Institute,
Manjari (Bk.), Pune-412308

Dr. D.S. Nimbalkar

Dr. D.S. Nimbalkar
Sr. Scientist & Head,

Dept. of Environmental Sciences
Vasantdada Sugar Institute.

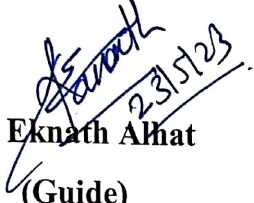


[Signature]

Principal
Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli,
Dist. Pune - 412 307

CERTIFICATE

This is to certify that, **Mr. Mahendra Kishor Waske** has successfully completed research project '**Mineralization of sugar mill condensate after treatment through C.P.U. and R.O. and comparison with packaged drinking water**' under my guidance and supervision, and submitted the project as laid down by Department of Environmental Sciences, Vasantdada Sugar Institute, Manjari. The material that has been obtained from other sources is duly acknowledged in the dissertation.


Dr. Eknath Ahat

(Guide)

Scientist

Dept. of Environmental

Sciences,

Vasantdada Sugar Institute,

Manjari, Pune.



Dr. Deepali Nimbalkar

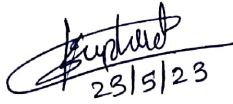
(Sr. Scientist and Head)

Dept. Of Environmental

Sciences,

Vasantdada Sugar Institute,

Manjari, Pune.


23/5/23

Mr. Kapil Uphade

(Co- Guide)

Scientific officer

Dept. of Environmental

Sciences,

Vasantdada Sugar Institute

Manjari, Pune.




Principal

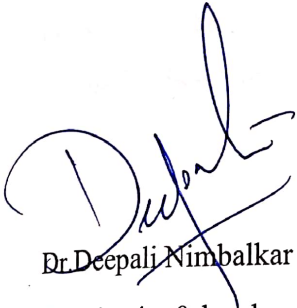
Vasantdada Sugar Institute

Manjari (Bk.), Tal. Haveli,

Dist. Pune - 412 307

CERTIFICATE

This is certified that the dissertation “**USING PHYTOREMEDIATION OF SUGAR EFFLUENT INLET BY VITIVER PLANT**” submitted in partial fulfillment for the requirement of degree in master of sciences in environmental sciences of the vasantdada sugar institute is a record of bonafide research work carried out by Disale Rohan Ramesh Under my guidance and supervision.



Dr. Deepali Nimbalkar

Sr. scientist & head

Department of environmental science

Vasantdada sugar institute, pune.



Dr. Hemlata Hingne

(guide)

Department of environmental science

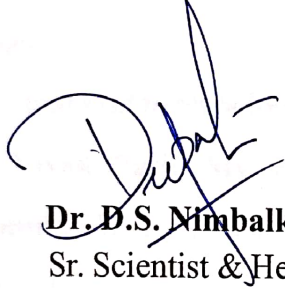
Vasantdada sugar institute pune.



Principal
Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli,
Dist. Pune - 412 307

CERTIFICATE

This is to certify that the dissertation entitled "**Identification of suitable measures to minimize air pollution at work places in the sugar industry**" submitted in partial fulfilment for the requirement of degree in Master of Sciences in Environmental Sciences, of the Vasantdada Sugar Institute, is a record of bonafide research work carried out by **Mr. Vaibhav Chandrakant Yadav** under my guidance and supervision.



Dr. D.S. Nimbalkar
Sr. Scientist & Head

Dept. of Environmental Sciences
Vasantdada Sugar Institute,
Manjari Bk., Pune



Mr. Vikram Deshmukh
(Guide)

Dept. of Environmental Sciences
Vasantdada Sugar Institute,
Manjari Bk., Pune



Principal
Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli,
Dist. Pune - 412 307

CERTIFICATE

This is to certify that the dissertation entitled "**Green Synthesis of Zinc Oxide Nanoparticles to Enhance the Functional Properties of Eco-friendly Bioplastic Derived from Manihot.Esculenta**" submitted in partial fulfilment for the requirement of degree in Master of Sciences in Environmental Sciences, of the Vasantdada Sugar Institute, is a record of bonafide research work carried out by **Ms. Bhosale Nishita Bhagywant** under my guidance and supervision. It is further certified that the work or its part has not been submitted to any other university for examination.



Dr. D. S. Nimbalkar

Sr. Scientist and Head,

Department of Environmental Sciences,
Vasantdada Sugar Institute,
Manjari (BK), Pune

GUIDE



Ms. Priyanka B. Kad

Research Assistant

Department of Environmental Sciences,
Vasantdada Sugar Institute,
Manjari (BK), Pune

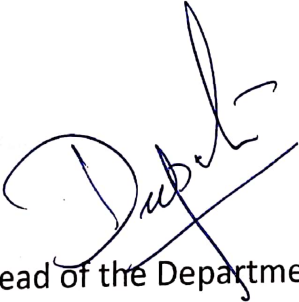


Principal
Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli,
Dist. Pune - 412 307



CERTIFICATE

This is to certify that, Miss. Priyanka Govind Borse has successfully completed research project "**Removal of BOD, COD, and TSS from Sewage Water through Phyto-Remediation by using an Aquatic Plant Species *Canna indica*.**" under my suidence and supervision, and submitted the project as laid down by department of environmental sciences, Vasantdada sugar institute, Manjari. The material that has been obtained from other sources is duly acknowledge in the dissertation. It is further certified that the work or its part has not been sybmitted to any other university for the examination under my supervision. I consider this work worthy for the award of the degree of Master.



Head of the Department

Dr. Deepali Nimbalkar

Sr. Scientist & Head

Department of Environmental Science



Guide

Dr. Amol Deshmane

Scientist

Department of Environmental
Science



Principal

Vasantdada Sugar Institute


Manjari (Bk.), Tal. Haveli,

Dist. Pune - 412 307


CERTIFICATE

This is to certify that, Mr. ChikaneRohit Sanjay has successfully completed research project “Removal of Sulphur from Biogas Desulphurization Method” under my guidance and supervision, and submitted the project as laid down by department of Environmental sciences, Vasantdada Sugar Institute, Manjari. The material that has been obtained from other sources is duly acknowledged in the dissertation. It is further certified that the work or its part has not been submitted to any other university for the examination under my supervision.

Principal, Vasantdada Sugar Institute, Manjari



Dr. Hemlata Hingne
(Sci. Officer)
(Guide)

Dept. of Environmental Science
Vasantdada Sugar Institute, Manjari Pune.


Dr. Deepali Nimbalkar
(Sr. Scientist and Head,)

Department of Environmental science
Vasantdada Sugar Institute Pune.




Principal
Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli,
Dist. Pune - 412 307

CERTIFICATE

This is to certify that the dissertation entitled “Study of Conversion of Waste Plastic into Hydrocarbon Fuel through Catalytic Depolymerization” submitted in partial fulfilment for the requirement of degree in Masters of Science in Environmental Sciences of the Vasantdada Sugar Institute Manjari (Bk.), Pune, is a record of bonafide research work carried out by Mr. Akash R. Choudhari under my guidance and supervision. I consider this work worthy for the award of the degree of Master.



Dr. D.S. Nimbalkar

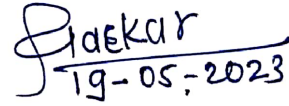
Sr. Scientist and Head,

Department of Environmental Science,
Vasantdada Sugar Institute
Manjari (BK), Pune



Principal

Vasantdada Sugar Institute
Manjari (Bk.), Tal. Haveli,
Dist. Pune - 412 307



Mr. Nitin Harkar

(GUIDE)

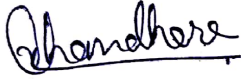
Research Assistant

Department of Environmental Science
Vasantdada Sugar Institute,
Manjari (BK), Pune.

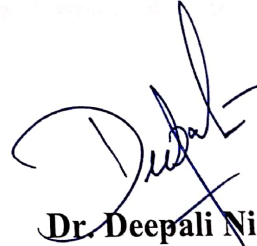


CERTIFICATE

This is to certify that, Miss. Varsha Mahadev Jadhav has successfully completed research project "To evaluate the nutrient status of the biocahr, compost and biogas slurry" under my guidance and supervision, and submitted the project as laid down by department of Environmental sciences, Vasantdada sugar institute, Manjari. The material that has been obtained from other sources is duly acknowledge in the dissertation. It is further certified that the work or its part has not been submitted to any other university for the examination under my supervision. I consider this work worthy for the award of the degree of Master.



Miss. Vishakha Chandhere
(Guide)
Founder OrjaBox LLP.
Kharadi , Pune.



Dr. Deepali Nimbalkar
(Co-guide)
Sr. Scientist & Head
Dept. of Environmental Sciences
Vasantdada Sugar Institute, Manjari Pune.



Principal
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CERTIFICATE

This is to certify that, the dissertation entitled "Utilization of Enriched Bio-sludge for Growing Single Eye Bud of Sugarcane" submitted in partial fulfilment for the requirement of degree in Master of Sciences in Environmental Sciences of the Vasantdada Sugar Institute, Manjari (Bk.), Pune, is a record of bonafide research work carried out by Miss. Pratiksha Sanjay Shekhar under my guidance and supervision.



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