

GREEN AUDIT REPORT
of
Shree Santkrupa Shikshan Sanstha's
SHREE SANTKRUPA COLLEGE OF PHARMACY,
Ghogaon (Shivajinagar)
Dist. Satara (M.H.) – 415 111

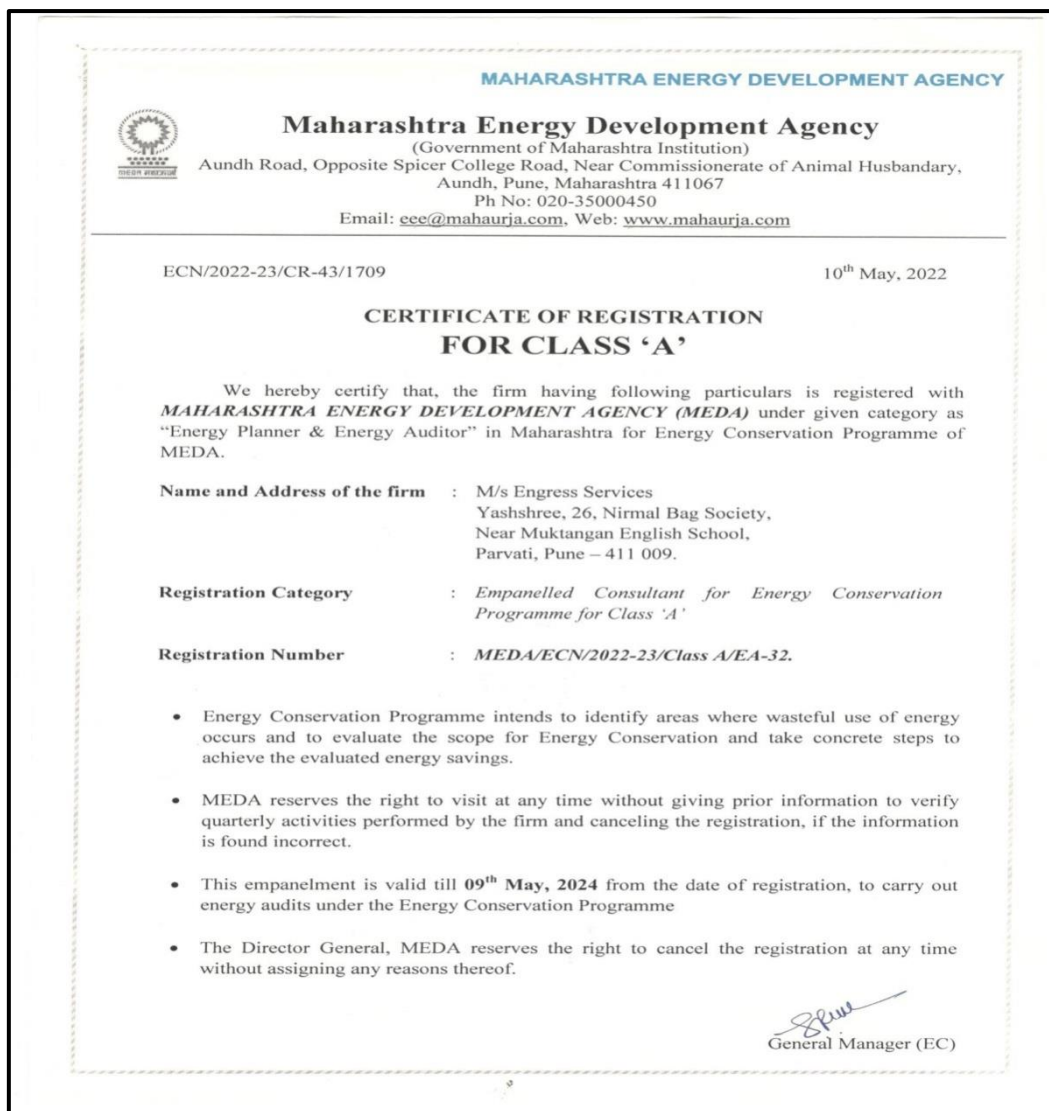


Year: 2021-22

Prepared by:

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CERTIFICATE

This is to certify that we have conducted Green Audit at Shree Santkrupa College of Pharmacy, Ghogaon in the Academic year 2021-22.

The College has adopted following Green Initiatives:

- Usage of Energy Efficient LED Light Fitting
- Maximum Usage of Day Lighting
- Provision of Separate bins for Dry & Wet Waste
- The College has installed Septic Tank and is cleaned periodically.
- Implementation of Rain Water Management Project
- Maintenance of good Internal Road
- Tree Plantation in the campus
- Creation of awareness by Display of Posters on Resource Conservation

We appreciate the support of Management, involvement of faculty members and students in the process of Energy Conservation & making the campus Green.

For Engress Services,



A Y Mehendale,
Certified Energy Auditor, EA-8192
ASSOCHAM GEM Certified Professional: GEM: 22/788

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ACKNOWLEDGEMENT

We Engress Services, Pune, express our sincere gratitude to the management of at Shree Santkrupa College of Pharmacy, Ghogaon, for awarding us the assignment of Green Audit of their Campus for the Academic Year: 2021-22.

We are thankful to all the Principal and Staff members for helping us during the field study.

EXECUTIVE SUMMARY

1. **Shree Santkrupa College of Pharmacy, Ghogaon** consumes Energy in the form of **Electrical Energy**; used for various Electrical Equipment, office & other facilities.

1. Present Energy Consumption & CO₂ Emissions:

No	Parameter/ Value	Energy Purchased, kWh	CO ₂ Emissions, MT
1	Total	10608	9.5472
2	Maximum	1577	1.4193
3	Minimum	456	0.4104
4	Average	884	0.7956

3. Various initiatives taken for Energy Conservation:

- Usage of Energy Efficient LED Lighting
- Maximum Usage of Day Lighting

4. Usage of Renewable Energy & CO₂ Emission Reduction:

- It is recommended to install roof-top solar PV Plant on college building.

5. Waste Management:

5.1 Segregation of Waste at Source:

The Waste is segregated at source and the recyclable waste, like paper, plastic waste is handed over to Authorized waste collecting agent for further recycling.

5.2 Organic Waste Management:

The Institute has a Bio Composting Pit, to convert the Leafy Waste into Bio Compost.

5.3 Liquid Waste Management:

The College has installed Septic and is cleaned periodically.

5.4E-Waste Management:

It is recommended to dispose of the E Waste through Authorized Agency.

5.5 Sanitary Waste Incinerator:

It is recommended to install Sanitary Waste Incinerator for sanitary waste disposal.

6. Rain Water Management:

The College has Rain Water Management Project. The College has installed Pipes from the terrace and the Rain water falling on the terrace is used to increase the underground water table.

7. Green & Sustainable Initiatives

- Maintenance of good Internal Road
- Maintenance of Internal Garden
- Display of Posters on Resource Conservation
- Best Practices and Initiative for Social Awareness

8. Notes & Assumptions:

1. 1 kWh of Electrical Energy releases **0.9 Kg of CO₂** into atmosphere
2. Average Energy generated by **1 kWp** Solar PV Plant : **4 kWh/Day**
3. Annual Solar Energy Generation Days: **300 Nos**

9. References:

- For CO₂ Emissions: www.tatapower.com
- For Roof Top Solar Energy Generation: www.solarrooftop.gov.in
- For Various Indoor Air Parameters: www.ishrae.com
- For AQI & Water Quality Standards: www.cpcb.com

ABBREVIATIONS

BEE	Bureau of Energy Efficiency
kWh	Kilo Watt Hour
LPD	Liters Per Day
Kg	Kilo Gram
MT	Metric Ton
CO ₂	Carbon Di Oxide
Qty	Quantity

CHAPTER-I INTRODUCTION

1.1 Objectives:

1. To study present Energy Consumption
2. To Study CO₂ emissions
3. To study usage of Renewable Energy
4. Study of Waste Management
5. Study of Rain Water Management
6. Study of Green & Sustainable Practices

1.2 General Details of College: Table No 1:

No	Head	Particulars
1	Name of Institution	Shree Santkrupa College of Pharmacy, Ghogaon
2	Address	Ghogaon (Shivajinagar) Dist. Satara (M.H.) – 415 111
3	Affiliation	Shivaji University, Kolhapur



CHAPTER-II

STUDY OF PRESENT ENERGY CONSUMPTION

In this chapter, we present the analysis of last year Electricity Bills

Table No 2: Electrical Bill Analysis- 2021-22:

No	Month	Energy Purchased, kWh
1	Apr-21	1577
2	May-21	700
3	Jun-21	463
4	Jul-21	456
5	Aug-21	477
6	Sep-21	652
7	Oct-21	671
8	Nov-21	1072
9	Dec-21	1121
10	Jan-22	1402
11	Feb-22	1036
12	Mar-22	981
13	Total	10608
14	Maximum	1577
15	Minimum	456
16	Average	884

Chart No 1: Variation in Monthly Energy Consumption:

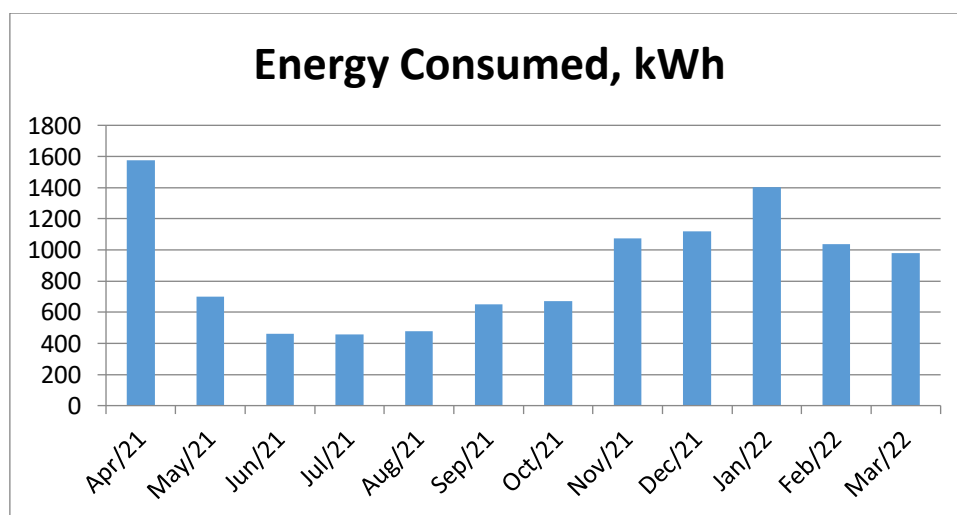


Table No 3: Variation in Important Parameters:

No	Parameter/ Variation	Energy Purchased, kWh
1	Total	10608
2	Maximum	1577
3	Minimum	456
4	Average	884

CHAPTER III

STUDY OF CARBON FOOTPRINTING

A **Carbon Foot print** is defined as the Total Greenhouse Gas emissions, emitted due to various activities. In this we compute the emissions of Carbon-Di-Oxide, by usage of the various forms of Energy used by the College for performing its day to day activities

The College uses Electrical Energy for various Electrical gadgets.

Basis for computation of CO₂ Emissions:

The basis of Calculation for CO₂ emissions is as under.

- **1 kWh** of Electrical Energy releases **0.9 Kg of CO₂** into atmosphere

Based on the above Data we compute the CO₂ emissions which are being released in to the atmosphere by the College due to its Day to Day operations

Table No4: Month wise CO₂ Emissions:

No	Month	Energy Purchased, kWh	CO ₂ Emissions, MT
1	Mar-21	1577	1.52
2	Apr-21	700	0.73
3	May-21	463	0.52
4	Jun-21	456	0.52
5	Jul-21	477	0.54
6	Aug-21	652	0.70
7	Sep-21	671	0.71
8	Oct-21	1072	1.08
9	Nov-21	1121	1.12
10	Dec-21	1402	1.36
11	Jan-22	1036	1.03
12	Feb-22	981	0.99
13	Total	10608	10.83
14	Maximum	1577	1.52
15	Minimum	456	0.52
16	Average	884	0.90

Chart No 2: Month wise CO₂Emissions:

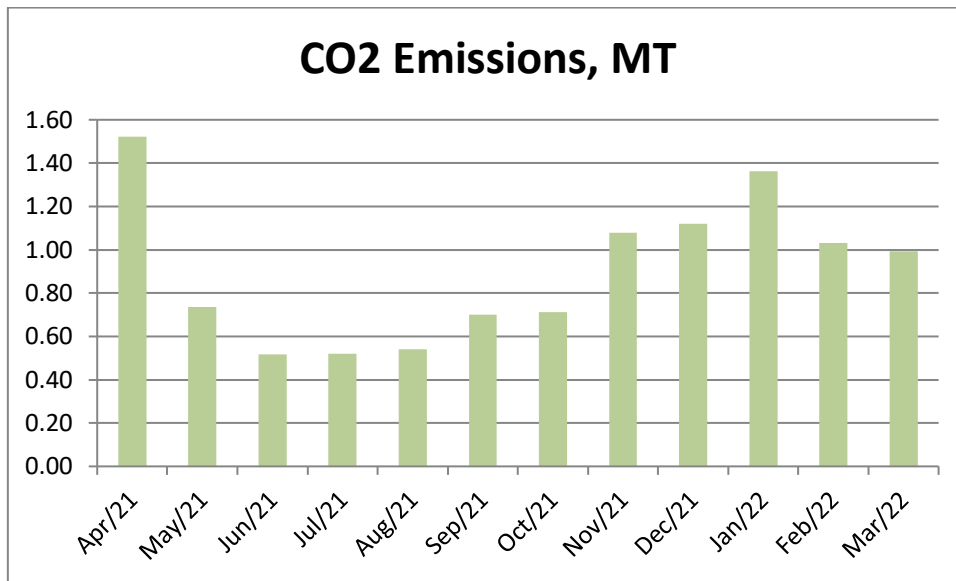


Table No 5: Variation in Important Parameters:

No	Parameter/ Variation	Energy Purchased, kWh	CO2 Emissions, MT
1	Total	10608	10.83
2	Maximum	1577	1.52
3	Minimum	456	0.52
4	Average	884	0.90

CHAPTER IV STUDY OF USAGE OF RENEWABLE ENERGY

As on today College has not install solar roof-top PV plant.

CHAPTER V STUDY OF WASTE MANAGEMENT

5.1 Segregation of Waste at Source:

The Waste is segregated at source and the recyclable waste, like paper waste is handed over to authorized waste collecting agent for further recycling.



5.2 Bio Composting Pit:

The Institute has a Bio Composting Pit, to convert the Leafy Waste into Bio Compost.

Photograph of Bio Composting Pit:



5.3 Liquid Waste Management:

The College has installed Septic tank and is cleaned periodically.

5.4 E-Waste Management:

It is recommended to dispose of the E Waste through Authorized Agency.

5.5 Sanitary Waste Incinerator:

The College has not install Sanitary Waste Incinerator. It is recommended to install Sanitary Waste Incinerator.

CHAPTER-VI

STUDY OF RAIN WATER MANAGEMENT

The Institute has implemented the Rain Water Management Project. The Institute has installed Pipes from the terrace and the Rain water falling on the terrace is gathered and is used for recharging the water table.

Photograph of Rain Water Management Section:



CHAPTER-VII

STUDY OF GREEN & SUSTAINABLE PRACTICES

7.1 Pedestrian Friendly Roads:

The College has well maintained internal road to facilitate the easy movement of the students within the campus.

Photograph of Internal Road:



7.2 Internal Tree Plantation:

The College has well maintained landscaped garden in the campus.

Photograph of Tree plantation:



7.3 Provision of Ramp:

The College has facility for ramp, for easy movement for Divyaang.



7.4 Creation of Awareness about Water Conservation:

The College has displayed posters emphasizing on importance of Water Conservation awareness.

Photograph of Poster on Water Conservation awareness:



ANNEXURE-1:

DETAILS OF TREES & PLANTS:

Presently the College Campus has more than 100 trees:

No	Name of Trees
1	Kadamba Tree
2	Gulmohor
3	Mangifera India
4	Coconut
5	Morpankhi
6	Cycus

