

# Green Audit REPORT



**Dr. RADHA BAI GOVT. NAVIN KANYA  
MAHAVIDYALAY, RAIPUR**

(डॉ० राधा बाई शा० नवीन कन्या महाविद्यालय, रायपुर, छत्तीसगढ़)



**(IQAC)**

# **Green Audit Team**

## **External**

- Dr. Kavita Sharma, Asst. Professor, Botany, Govt. Arts and Commerce College, Devendra Nagar
- Dr. Reenu Verma, Govt. P.G. College, Bhilai-3, Dist-Dug (C.G.)
- Dr. Suneeta Patra, Asst. Professor, Botany, Govt. N.P.C. College of Science, Raipur (C.G.)

## **Internal**

- Dr. Priti Srivastava, Asst. Professor, Botany
- Dr. Atul Trivedi, Asst. Professor, Zoology
- Dr. Shweta Agniwanshi, Asst. Professor, Zoology
- Dr. Anita Sarin, Professor, Chemistry

## **Introduction**

The following report is a systematic identification, recording and reporting of environmental diversity present in the institute campus.

The report will help in identification of standing of college in terms of environmental sustainability.

## **Objectives**

The following objectives were set for the following Green Audit

- To map the geographical location of the college.
- To document floral diversity of the college.
- To document fauna diversity of the college.
- To document the water quality of the college
- To document sound quality of the college
- To document the air quality of the college.

## **Vision of this audit**

The audit focuses upon promoting the environmental literacy among the stakeholders of the college.

## **Process of Data Collection and Processing**

The data for the audit was collected from the college campus. The method for analysing the data for water, air and sound quality has been mentioned the detailed report furnished by the auditing agency.


## Geographical Location of the College




# FLORAL DIVERSITY

The college has a lush green campus. The plantation has been carried out in the campus keeping in view that majority of the plants and trees should have some medicinal values. The Floral survey of the campus has been presented below.

Vegetation survey of college campus				
Plant number	Plant name	Botanical name	Family	Medicinal uses
1,2,6,7,8,9,10,11,13	Fish tail palm (Jaggary palm)	<i>Caryota urens</i>	Araceae	<ul style="list-style-type: none"> <li>❖ For urinary disorder and seminal weakness.</li> <li>❖ Flower is used to treat gastric ulcer, migraine headaches, snake bite poisoning as well as rheumatic swelling.</li> <li>❖ Commercially its inflorescence sap is used to make sugar and alcoholic beverages.</li> </ul>
3,4,14,15,17	Peepal	<i>Ficus religiosa</i>	Moraceae	<ul style="list-style-type: none"> <li>❖ Peepal tree leaves have the capability to cure skin diseases, kidney problems constipation, dysentery, impotency and various other blood related problems</li> </ul>
5	Banyan Tree	<i>Ficus benghalensis</i>	Moraceae	<ul style="list-style-type: none"> <li>❖ It can cure chronic diarrhea, dysentery and piles, Also treats gum and teeth disorders lower back and rheumatic pain</li> </ul>
12	Bougainvillea	<i>Bougainvillea spectabilis</i>	Nyctaginaceae	<ul style="list-style-type: none"> <li>❖ Leaves are use to cure diabetes -2</li> <li>❖ Stem help in hepatitis</li> <li>❖ Leaves are used to cure variety of disorders like for diarrhea and to reduce stomach acidity</li> </ul>
24	Karanj tree	<i>Pongamia pinnata</i>	Fabaceae	<ul style="list-style-type: none"> <li>❖ Crud drug used for treatment of tumors, piles, skin disease and ulcers</li> <li>❖ The root is effective for treating gonorrhea, cleaning gums, teeth and ulcer and used in vaginal and skin diseases.</li> </ul>

  
 (Dr. Suneeta Patra)  
 Assistant Professor  
 Dept. Of Botany  
 Govt. N.P.G. College Of Science,  
 Raipur (C.G.)

1

  
 Dr. Kavita Sharma,  
 Head,  
 Deptt. of Botany,  
 Govt. Arts & Commerce Girls College,  
 Ravindra Nagar, RAIPUR.

Plant number	Plant name	Botanical name	Family	Medicinal uses
23	European chestnut	<i>Castanea sativa</i>	Fagaceae	❖ Tea made from the leaves are a cure for respiratory diseases, such as whooping cough, mixed with thyme make a powerful medicinal syrup used to treat cough, diarrhea & backache.
16	Kadamb	<i>Anthocephalus kadamb</i>	Rubiaceae	❖ Helps in digestive disorders, parasitic infections, high cholesterol and triglycerides diabetes.
18, 19, 20, 21, 22, 25	Sago palm	<i>Cycas revoluta</i>	Cycaceae	❖ Leaves are used in the treatment of cancer and hepatoma. ❖ The terminal shoot is astringent and diuretic ❖ Seed is used in treatment of rheumatism.



Assistant Professor  
Dept. Of Botany  
Govt. N.P.G. College Of Science,  
Raipur (C.G.)

  
Dr. Kavita Sharma,  
Head,  
Dept. of Botany,  
Govt. Arts & Commerce Girls College,  
Bhavendra Nagar, RAIPUR.



## FAUNA DIVERSITY

The following fauna diversity was observed in the campus.

DR. RADHA BAI GOVERNMENT NAVIN KANYA MAHAVIDYALAYA RAIPUR

### FAUNA SURVEY

S. NO.	General Name	Description
1.	Indian Cow	Bos taurus Indicus
2.	Indian Squirrel	Funambulus
3.	Indian Native Dog	Canis
4.	Common wall Lizard	Hemidactylus
5.	Indian Sparrow	Passer domesticus
6.	Indian ants	Family Formicidae
7.	Dragon Fly	order -odonata
8.	Millipedes	Class - Diplopoda
9.	Moths	Order -Lepidoptera
10.	Butterflies	Order - Lepidoptera
11.	Mosquitoes	Order - Lepidoptera
12.	Owl	Bubo
13.	Snake	Reptile
14.	Hawk	
15.	Centipedes	Class - Chilopoda
16.	Indian Garden lizard	Calotes
17.	Indian Spider	Class - Arachnida
18.	Indian Mongrore	Family - Herpestidae
19.	Indian koel	Eudynamis
20.	Frog	Class - Amphibia
21.	Cat	Class - mammal
22.	Mouse/Mice (Indian Rat)	Class - mammal
23.	Indian Parakeet	Family psittaculidae
24.	Bat	Class - mammal
25.	Indian scorpion	Class-arachnida(arthropoda)
26.	snail	Phylum mollusca

*P. Venu*  
Smt Renu Venu  
Head of Zoology Deptt.  
Govt. P.G. College  
Bhilai-3, Distt.-Durg (C.G.)

## **CONSERVATION MEASURES, AIR, WATER, and SOUND QUALITY REPORT**

**The institution has implemented the following as energy conservation measures –**

- **SOLAR ENERGY GENERATOR &**
- **WATER HARVESTING SYSTEM**

**Mentions in the Report –**

- **(METHOD OF TESTING,**
- **SAMPLE COLLECTED,**
- **ANALYTICAL REPORT, and**
- **FINDINGS MENTIONED IN THE REPORTS)**





HDD-272, Phase III - Near JP Chowk  
Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099  
Ph : 0771 - 4027777 | Email : ultimatenviro@gmail.com

Recognized by Ministry of Environment Forest and Climate Change under EP act 1986

Name & Address Of The Customer

To,  
**Dr. Radhabai Govt. Navin Girls  
Collage, Dudhadhari Mandir Rd.,  
Near Dudhadhari Matt, Mahamai  
Para, Raipur (C.G.) 492001**

REPORT NO.	UES/TR/20-21/1366
LAB REF NO.	UES/20-21/AAQM/1818
DATE OF SAMPLING	12/10/2020
DATE OF RECEIPT	13/10/2020
DATE OF REPORT	17/10/2020
DATE OF ANALYSIS	Start:14/10/2020 End:17/10/2020

#### SAMPLE DETAILS

MONITORING FOR	AMBIENT AIR QUALITY MONITORING
CUSTOMER REF. NO. & DATE	AS PER VERBAL COMMUNICATION WITH SANJAY SHRIVASTAVA, DATED:10/10/2020
SAMPLING LOCATION	NEAR STAFF ROOM
DURATION OF SAMPLING	24 HOURS
SAMPLE COLLECTED BY	LABORATORY CHEMIST
SAMPLING PROCEDURE	AS PER METHOD REFERENCE
SAMPLE QUANTITY/PACKING	FILTER PAPER (PM <sub>10</sub> ): 1X1 NO., FILTER PAPER (PM <sub>2.5</sub> ): 1X1 NO. SO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE, NO <sub>2</sub> : 30MLX1 NO. PVC BOTTLE

### TEST REPORT

SR. NO.	PARAMETER	UNIT	NAAQM STANDARD	METHOD REFERENCE	RESULT
					NEAR STAFF ROOM
1	Particulate Matter size less than 10 microns (PM <sub>10</sub> )	µg/m <sup>3</sup>	100	IS:5182:(Part-23): 2006 & CPCB Guidelines Vol.-I	49
2	Particulate Matter size less than 2.5 microns (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	60	CPCB Guidelines Vol.-I	26
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	IS:5182:(Part-2): 2001, RA 2006 & CPCB Guidelines Vol.-I	08
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	IS:5182:(Part-6): 2006 & CPCB Guidelines Vol.-I	12

Note: All results are on the basis of 24 hour sampling.

#### REMARKS: RESULTS ARE AS ABOVE

#### Terms & conditions

- > The report for publication, arbitration or as legal dispute is forbidden.
- > Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer.
- > This is for information as the party has asked for above test(s) only

*Thakur*  
17/10/2020  
PREPARED BY



For **ULTIMATE ENVIROLYTICAL SOLUTIONS**  
*Thakur*  
17/10/2020  
AUTHORIZED SIGNATORY

-----End of the test report-----





HDD-272, Phase III - Near JP Chowk  
Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099  
Ph : 0771 - 4027777 | Email : ultimatenviro@gmail.com

Recognized by Ministry of Environment Forest and Climate Change under EP act 1986

<b>Name &amp; Address Of The Customer</b> <b>To,</b> <b>Dr. Radhabai Govt. Navin Girls</b> <b>Collage, Dudhadhari Mandir Rd.,</b> <b>Near Dudhadhari Matt, Mahamai Para,</b> <b>Raipur (C.G.) 492001</b>		<b>Report No</b>	UES/TR/20-21/1367	
		<b>Lab Ref No</b>	UES/20-21/W/1819	
		<b>Date of Sampling</b>	12/10/2020	
		<b>Date of Receipt</b>	13/10/2020	
		<b>Date of Report</b>	17/10/2020	
		<b>Date of analysis</b>	Start:14/10/2020	END:17/10/2021
<b>SAMPLE DETAILS</b>				
<b>Customer Sample Id /Sampling Location</b>	Borewell Water			
<b>Customer Ref. No. &amp; Date</b>	As per verbal communication with Sanjay Shrivastava, Dated:10/10/2020			
<b>Sample Type</b>	Borewell Water			
<b>Packing of Sample</b>	Plastic Bottle (5ltr.) Glass Bottle (350 ml)			
<b>Sample Collected By</b>	Laboratory Chemist			
<b>Sample Condition At Receipt</b>	Ok			

REPORT NO. 1367

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Requirement (Acceptable Limit)	Permissible Limit in the Absence of Alternate Source	
A. Organoleptic & Physical Parameters						
1	Colour	Hazen	IS:3025: (Part-4)	5	15	<1
2	Odour	-	IS:3025 (part-5)	Agreeable	Agreeable	Agreeable
3	pH Value at 24.7°C	-	IS:3025: (Part-11)	6.5-8.5	No Relaxation	7.26
4	Taste	-	IS:3025 (part-8)	Agreeable	Agreeable	Agreeable
5	Turbidity	NTU	IS:3025: (Part-10)	1	5	0.78
6	Total Dissolved Solids	mg/L	IS:3025: (Part-16)	500	2000	428
B. General Parameters Concerning Substances undesirable in excessive amounts						
1	Aluminium (as Al)	mg/L	IS:3025 (part-55)	0.03	0.2	N.D.
2	Ammonia (as total ammonia-N)	mg/L	IS:3025 (part-34)	0.5	No Relaxation	N.D.
3	Anionic Detergent (as MBAS)	mg/L	Annex K of IS:13428	0.2	1.0	N.D.
4	Barium (as Ba)	mg/L	Annex F of IS:13428	0.7	No Relaxation	N.D.
5	Boron (as B)	mg/L	IS 3025: (Part-57)	0.5	1.0	N.D.
6	Calcium (as Ca)	mg/L	IS 3025: (Part-40)	75	200	62.4
7	Chloramines (as Cl <sub>2</sub> )	mg/L	IS 3025: (Part-26)	4.0	No Relaxation	N.D.
8	Chloride (as Cl)	mg/L	IS 3025: (Part-32)	250	1000	52.0
9	Copper (as Cu)	mg/L	IS 3025 (part-42)	0.05	1.5	N.D.
10	Fluoride (as F)	mg/L	IS 3025 (part-60)	1	1.5	0.08
11	Free Residual Chlorine	mg/L	IS 3025: (Part-26)	0.2	1	N.D.
12	Iron (as Fe)	mg/L	IS 3025 (part-53)	0.3	No Relaxation	0.11
13	Magnesium (as Mg)	mg/L	IS 3025: (Part-46)	30	100	21.6
14	Manganese (as Mn)	mg/L	IS 3025 (part-59)	0.1	0.3	N.D.



REPORT NO. 1367

**TEST REPORT**

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Requirement (Acceptable Limit)	Permissible Limit in the Absence of Alternate Source	
15	Mineral Oil	mg/L	Clause 6 of IS 3025 (Part-39) Infrared partition method	0.5	No Relaxation	N.D.
16	Nitrate (as NO <sub>3</sub> )	mg/L	IS 3025(part-34)	45	No Relaxation	1.2
17	Phenolic Compound (as C <sub>6</sub> H <sub>5</sub> OH)	mg/L	IS 3025(part-43)	0.001	0.002	N.D.
18	Selenium (as Se)	mg/L	IS 3025(part-56)	0.01	No Relaxation	N.D.
19	Silver (as Ag)	mg/L	Annex J of IS 13428	0.1	No Relaxation	N.D.
20	Sulphate (as SO <sub>4</sub> )	mg/L	IS 3025:(Part-24)	200	400	34.6
21	Sulphide (as H <sub>2</sub> S)	mg/L	IS 3025:(Part-29)	0.05	No Relaxation	N.D.
22	Total Alkalinity (as CaCO <sub>3</sub> )	mg/L	IS 3025:(Part-23)	200	600	156.0
23	Total Hardness (as CaCO <sub>3</sub> )	mg/L	IS 3025:(Part-21)	200	600	166.0
24	Zinc (as Zn)	mg/L	IS 3025(part-49)	5	15	N.D.
<b>C. Parameters concerning toxic substances:-</b>						
1	Cadmium (as Cd)	mg/L	IS 3025(part-41)	0.003	No Relaxation	N.D.
2	Cyanide (as CN)	mg/L	IS 3025(part-27)	0.05	No Relaxation	N.D.
3	Lead (as Pb)	mg/L	IS 3025(part-47)	0.01	No Relaxation	N.D.
4	Mercury (as Hg)	mg/L	IS 3025(part-48)	0.001	No Relaxation	N.D.
5	Molybdenum (as Mo)	mg/L	IS 3025(part-2)	0.07	No Relaxation	N.D.
6	Nickel (as Ni)	mg/L	IS 3025(part-54)	0.02	No Relaxation	N.D.
7	Polychlorinated biphenyls	mg/L	ASTM 5175	0.0005	No Relaxation	N.D.
8	Polynuclear aromatic hydrocarbons (as PAH)	mg/L	APHA 6440	0.0001	No Relaxation	N.D.
9	Arsenic (as As)	mg/L	IS 3025(part-37)	0.01	0.05	N.D.
10	Chromium (as Cr)	mg/L	IS 3025(part-52)	0.05	No Relaxation	N.D.
11	<b>Trihalomethanes:</b>					
a)	Bromoform	mg/L	APHA 6232	0.1	No Relaxation	N.D.
b)	Dibromochloromethane	mg/L	APHA 6232	0.1	No Relaxation	N.D.
c)	Bromodichloromethane	mg/L	APHA 6232	0.06	No Relaxation	N.D.
d)	Chloroform	mg/L	APHA 6232	0.2	No Relaxation	N.D.
<b>D. Radioactive Materials</b>						
1	Alpha emitters	Bq/l	Part 2	0.1	No relaxation	N.D.
2	Beta emitters	Bq/l	Part 1	1.0	No relaxation	N.D.
<b>E. Pesticides:-</b>						
1	Alpha HCH	µg/l	USEPA 508	0.01		N.D.
2	Beta HCH	µg/l	USEPA 508	0.04		N.D.
3	Delta HCH	µg/l	USEPA 508	0.04		N.D.





HDD-272, Phase III - Near JP Chowk  
Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099  
Ph : 0771 - 4027777 | Email : ultimatenviro@gmail.com

Recognized by Ministry of Environment Forest and Climate Change under EP act 1986

REPORT NO. 1367

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Requirement (Acceptable Limit)	Permissible Limit in the Absence of Alternate Source	
4	Alachlor	µg/l	USEPA 525.2, 507	20		N.D.
5	Aldrin / Dieldrin	µg/l	USEPA 508	0.03		N.D.
6	Atrazine	µg/l	USEPA 525.2, 8141 A	2		N.D.
7	Butachlor	µg/l	USEPA 525.2, 8141 A	125		N.D.
8	Chlorpyrifos	µg/l	USEPA 525.2, 8141 A	30		N.D.
9	DDT (o,p and p, p- Isomers of DDT, DDE and DDD)	µg/l	USEPA 508	1		N.D.
10	Gamma HCH	µg/l	USEPA 508	2		N.D.
11	2,4-Dichlorophenoxyacetic Acid	µg/l	USEPA 515.1	30		N.D.
12	Endosulphan (alpha, beta and sulphate)	µg/l	USEPA 508	0.4		N.D.
13	Ethion	µg/l	USEPA 1657 A	3		N.D.
14	Isoproturon	µg/l	USEPA 532	9		N.D.
15	Malathion	µg/l	USEPA 8141 A	190		N.D.
16	Methyl Parathion	µg/l	USEPA 8141 A	0.3		N.D.
17	Monocrotophos	µg/l	USEPA 8141 A	1		N.D.
18	Phorate	µg/l	USEPA 8141 A	2		N.D.
<b>F. Microbial Parameters</b>						
1	Total Coliform	MPN/100ml	IS:1622:1981:RA:2019	Shall not be detectable in any 100 ml Sample		Absent
2	E. Coli	MPN/100ml	IS:1622:1981:RA:2019			Absent

Note: mg/lit.:milligram per liter, N.D.: Not Detected.

### REMARKS: RESULTS ARE AS ABOVE

#### Terms & conditions

- > The use of the report for publication, arbitration or as legal dispute is forbidden.
- > Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer.
- > This is for information as the party has asked for above test(s) only.

 <b>PREPARED BY</b>	 <b>For</b>	 <b>AUTHORIZED SIGNATORY</b>
------------------------	----------------	---------------------------------

-----End of the test report-----





HDD-272, Phase III - Near JP Chowk  
Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099  
Ph : 0771 - 4027777 | Email : ultimatenviro@gmail.com

Recognized by Ministry of Environment Forest and Climate Change under EP act 1986

<b>To,</b> <b>Dr. Radhabai Govt. Navin Girls Collage,</b> <b>Dudhadhari Mandir Rd.,</b> <b>Near Dudhadhari Matt, Mahamai Para,</b> <b>Raipur (C.G.) 492001</b>		REPORT NO.	UES/TR/20-21/1368
		LAB REF NO.	UES/20-21/N/1820-1832
		DATE OF REPORT	17/10/2020
		DATE OF SAMPLING	12/10/2020 to 13/10/2020
<b>SAMPLE DETAILS</b>			
Monitoring For	Noise Level Monitoring		
Customer Ref. No. & Date	As per verbal communication with Sanjay Shrivastava, Dated:10/10/2020		
Sample Collected By	Laboratory Chemist		
Sampling Procedure	Manufacturer's Instruction		

TEST REPORT					
LOCATION	UNIT	RESULT		LIMIT (RESIDENTIAL ZONE)	
		DAY TIME	NIGHT TIME	DAY TIME	NIGHT TIME
Botany Lab	dB(A)	54.7	42.0	55	45
ZOOLOGY LAB	dB(A)	53.0	42.2		
HOME SC. LAB	dB(A)	52.9	44.8		
LIBRARY & READING ROOM	dB(A)	53.0	44.0		
SEMINAR HALL-1	dB(A)	52.2	40.6		
AUDITORIUM - 1	dB(A)	50.7	38.6		
PRINCIPAL ROOM	dB(A)	50.5	40.8		
OFFICE	dB(A)	49.9	44.8		
STAFFROOM	dB(A)	52.2	42.8		
COMPUTER LAB & GYM	dB(A)	50.9	40.2		
PHYSICS LAB	dB(A)	53.7	38.4		
CHEMISTRY LAB	dB(A)	50.0	42.4		
BASKET BALL GROUND	dB(A)	54.8	40.6		

**REMARKS: RESULTS ARE AS ABOVE**

**Terms & conditions**

- The use of the report for publication, arbitration or as legal dispute is forbidden.
- Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer.
- This is for information as the party has asked for above test(s) only.

 <b>PREPARED BY</b>	 <b>For ULTIMATE ENVIROLYTICAL SOLUTIONS</b>	 <b>AUTHORIZED SIGNATORY</b>
------------------------	---	---------------------------------

-----End of the test report-----