

1.3.2 Percentage of students undertaking project work/field work/internship (Data for the latest completed academic year)

Programme Name : B.Sc Chemistry

Sl.No.	Programme Code	Name of students undertaking project work/field work/internship	Project title page & Report /photograph of Field work	Completion Certificate
1	PWBSCH	AISWARYA A O	CLICK HERE	CLICK HERE
2	PWBSCH	AISWARYA O	CLICK HERE	
3	PWBSCH	ALPHONSA P J	CLICK HERE	
4	PWBSCH	AMAYA N	CLICK HERE	
5	PWBSCH	AMEESHA C M	CLICK HERE	
6	PWBSCH	ANAGHA C	CLICK HERE	
7	PWBSCH	ANAMIKA K UDAY	CLICK HERE	
8	PWBSCH	ANJALI KRISHNA T H	CLICK HERE	
9	PWBSCH	ANJU THOMAS	CLICK HERE	
10	PWBSCH	ANVITHA SHYAM	CLICK HERE	
11	PWBSCH	APARNA P S	CLICK HERE	
12	PWBSCH	AYSHA ZERIN	CLICK HERE	
13	PWBSCH	DEVAMITHRA M	CLICK HERE	
14	PWBSCH	DILSHANA V K	CLICK HERE	
15	PWBSCH	EMIL MARY BINU	CLICK HERE	
16	PWBSCH	FATHIMA HANAN E K	CLICK HERE	
17	PWBSCH	FATHIMA SHIRIL V	CLICK HERE	

18	PWBSCH	GAYATHRI KRISHNA M G	CLICK HERE
19	PWBSCH	GOPIKA M	CLICK HERE
20	PWBSCH	MARIYAM BINTH JAHFAR	CLICK HERE
21	PWBSCH	MEGHA K T	CLICK HERE
22	PWBSCH	MEGHNA BABU	CLICK HERE
23	PWBSCH	MUFEEDA PARVIN M P	CLICK HERE
24	PWBSCH	NANDA S	CLICK HERE
25	PWBSCH	NEAMAH FATHIMA M R	CLICK HERE
26	PWBSCH	NILA S	CLICK HERE
27	PWBSCH	RAMEESHA JARHAN V	CLICK HERE
28	PWBSCH	RAMYASREE K	CLICK HERE
29	PWBSCH	RIYA SUNIL	CLICK HERE
30	PWBSCH	SAHNA P T	CLICK HERE
31	PWBSCH	SANDRA T P	CLICK HERE
32	PWBSCH	SANIKHA DINESH	CLICK HERE
33	PWBSCH	SMRUTHI N	CLICK HERE
34	PWBSCH	SONA K S	CLICK HERE
35	PWBSCH	SREELAKSHMI VINAY A P	CLICK HERE
36	PWBSCH	SURIYA THOMAS	CLICK HERE
37	PWBSCH	SWETHA SATHEESH V	CLICK HERE
38	PWBSCH	THASNI A	CLICK HERE
39	PWBSCH	ADHITHYA SAJI	
40	PWBSCH	ADRA S	
41	PWBSCH	AKHINA K KRISHNAN	

42	PWBSCH	ANAINA AZEEZ K T
43	PWBSCH	ANANYA JAYAPRAKASH
44	PWBSCH	ANJALIKRISHNA T C
45	PWBSCH	ARYA K R
46	PWBSCH	AVANI RAJEEV
47	PWBSCH	AVANYA K P
48	PWBSCH	AYISHA LIBA T K
49	PWBSCH	FAHIMA A T
50	PWBSCH	FATHIMA HANNA P T
51	PWBSCH	GAYATHRI J P
52	PWBSCH	GOPIKA SHANOJ
53	PWBSCH	JANIS BOBBY
54	PWBSCH	JASMINE K M
55	PWBSCH	KRISHNA CHANDRA T
56	PWBSCH	KRISHNA PRIYA V
57	PWBSCH	LINDA S BABU
58	PWBSCH	LIYA DENNY
59	PWBSCH	LIYA K P
60	PWBSCH	MANJIMA M
61	PWBSCH	MEGHA K P
62	PWBSCH	MEGHA V
63	PWBSCH	MUFEEDA MARIYAM
64	PWBSCH	NANDANA C T
65	PWBSCH	NANDANA M M
66	PWBSCH	NANDANA VINOD
67	PWBSCH	NANDHANA T K
68	PWBSCH	NAYANA SHANMUGHAN M
69	PWBSCH	RENA FATHIMA P A
70	PWBSCH	SAGARIGA SURENDRAN K
71	PWBSCH	SANIKA SUNIL M K
72	PWBSCH	SHANIA NECTARINE MENDOZA
73	PWBSCH	SHIJINA V
74	PWBSCH	SHRADHA K YESUDAS

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75	PWBSCH	SREELAKSHMI S		
76	PWBSCH	SREYA SANTHOSH		
77	PWBSCH	YUDHIKA M		
78	PWBSCH	AARSHA BABU C		
79	PWBSCH	AGNA JOJI		
80	PWBSCH	AJANYA K ANIL		
81	PWBSCH	AMAYA K R		
82	PWBSCH	AMAYA KS		
83	PWBSCH	AMRUTHA UNNI	CLICK HERE	CLICK HERE
84	PWBSCH	ANJUSHA M		
85	PWBSCH	ANUGRAHA K		
86	PWBSCH	APARNA P		
87	PWBSCH	APARNA V		
88	PWBSCH	ARCHANA M K		
89	PWBSCH	ARYANANDA M		
90	PWBSCH	ASWANI V		
91	PWBSCH	AYISHA MIRSA		
92	PWBSCH	DEVIKA SASIKUMAR		
93	PWBSCH	GAYATHRI G K		
94	PWBSCH	GAYATHRI RAJ		
95	PWBSCH	HANIN SHARAF		
96	PWBSCH	HIBA FATHIMA		
97	PWBSCH	KEERTHANA N		
98	PWBSCH	MANUSMAYA P		
99	PWBSCH	MANYA R		
100	PWBSCH	NAFEESA THASNEEM		
101	PWBSCH	NAMITHA JOY		
102	PWBSCH	NANDANA M V		
103	PWBSCH	NIVEDHYA P P		
104	PWBSCH	POOJA S PRABHU		
105	PWBSCH	PRAVEENA VENUGOPAL		
106	PWBSCH	REEMA ROSARITA		
107	PWBSCH	REVATHI P		

108	PWBSCH	SAMANWAYA P T		
109	PWBSCH	SANDRA P M		
110	PWBSCH	SANGEERTHANA K		
111	PWBSCH	SHANA PARVIN		
112	PWBSCH	SHIVANI K M		
113	PWBSCH	SNEHA P		
114	PWBSCH	SNEHA SAJEEV		
115	PWBSCH	SONA S NAIR		
116	PWBSCH	SREDHA SREEDHARAN		
117	PWBSCH	SREELAKSHMI V		
118	PWBSCH	SWATHI P		
119	PWBSCH	SWATHI U		
120	PWBSCH	VYSHNAVI M		
121	PWBSCH	YUKTHA GOVIND S		

INTERNSHIPS/FIELD
WORK/PROJECT

Department of Chemistry
2021-22

Providence Women's College

Re-Accredited with A+ Grade by NAAC

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Website : www.providencecollegcalicut.ac.in



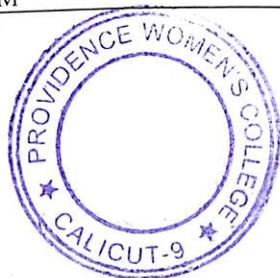
CARMEL HILL
MALAPARAMBA (P.O.)
CALICUT - 673 009

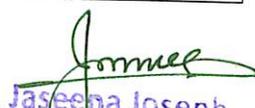
CERTIFICATE

This is to certify that the following students of III year Chemistry UG completed their project/ fieldwork as a part of their curriculum during the academic year 2021-22

AISWARYA A O
AISWARYA O
ALPHONSA P J
AMAYA N
AMEESHA C M
ANAGHA C
ANAMIKA K UDAY
ANJALI KRISHNA T H
ANJU THOMAS
ANVITHA SHYAM
APARNA P S
AYSHA ZERIN
DEVAMITHRA M
DILSHANA V K
EMIL MARY BINU
FATHIMA HANAN E K
FATHIMA SHIRIL V
GAYATHRI KRISHNA M G
GOPIKA M

MARIYAM BINTH JAHFAR
MEGHA K T
MEGHNA BABU
MUFEEDA PARVIN M P
NANDA S
NEAMAH FATHIMA M R
NILA S
RAMEESHA JARHAN V
RAMYASREE K
RIYA SUNIL
SAHNA P T
SANDRA T P
SANIKHA DINESH
SMRUTHI N
SONA K S
SREELAKSHMI VINAY A P
SURIYA THOMAS
SWETHA SATHEESH V
THASNI A




Dr. Sr. Jaseena Joseph
Principal (PIN 470173)
Providence Women's College
Kozhikode - 673 009

REMOVAL OF FLUORIDE ION IN POTABLE WATER USING COFFEE GROUND

SUBMITTED BY

- ANAGHA C (PWATSCH005)
- ANVITHA SHYAM (PWATSCH007)
- SMRUTHI N (PWATSCH015)
- GOPIKA M (PWATSCH029)
- NEAMAH FATHIMA MR (PWATSCH032)

DEPARTMENT OF CHEMISTRY
PROVIDENCE WOMEN'S COLLEGE
CALICUT – 09

Submitted to the University of Calicut in Partial Fulfilment of the Requirements
For the award of the Degree of BACHELOR OF SCIENCE in CHEMISTRY



Under the Guidance of

MS. ANEESHA KP

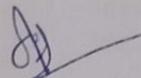
Junior Chemist, Water Lab.

CERTIFICATE

Certified that this project entitled "REMOVAL OF FLUORIDE ION IN POTABLE WATER " is based on the bonafide work done by ANAGHA C (PWATSCH005), ANVITHA SHYAM (PWATSCH007), SMRUTHI N (PWATSCH015), GOPIKA M (PWATSCH029), NEAMAH FATHIMA MR (PWATSCH032) under my supervision and guidance in partial fulfilment of the requirements for the award of the DEGREE OF BACHELOR OF SCIENCE in CHEMISTRY in the year 2021-2022.

Place: Malaparamba

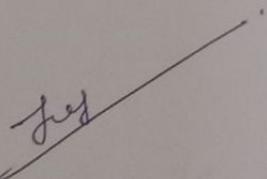
Date: May 2022



Dr. Sr. Asha Thomas

Head of the department

Department of chemistry



Jeeja Rani A.T
Assistant Professor
P.G. & Research Dept. of Chemistry
Malabar Christian College, Calicut - 1

COMPARITIVE STUDY OF DIFFERENT HONEY SAMPLES

SUBMITTED BY

- | | |
|--------------------------------------------|--------------|
| <input type="checkbox"/> RAMEESHA JARHAN V | (PWATSCH034) |
| <input type="checkbox"/> MEGHA KT | (PWATSCH003) |
| <input type="checkbox"/> MUFEEDA PARVIN MP | (PWATSCH031) |
| <input type="checkbox"/> THASNI A | (PWATSCH041) |

Under the Guidance of

GOPIKA A

Senior Chemist (Water Lab Calicut)

Submitted to the University of Calicut in Partial Fulfillment of the
Requirements

For the award of the Degree of
BACHELOR OF SCIENCE in CHEMISTRY



**DEPARTMENT OF CHEMISTRY
PROVIDENCE WOMEN'S COLLEGE
CALICUT - 09
2021-22**

CERTIFICATE

This is to certify that **Ms. Rameesha Jarhan V, Mufeeda Parvin MP, Thasni A, Megha KT** Department of Chemistry, Providence Women's College, Calicut has undergone internship Training and Project entitled "**Comparitive Study of Different Honey sample**" is an original work done by them at Water lab under my guidance.

Date: 8/02/2022

Place: Calicut



Gopika A
Senior Chemist
Water Lab



Sr. ASHA THOMAS
Assistant Professor & Head
Dept. of Chemistry
Providence Women's College
Calicut-9



Jeeja Rani A.T
Assistant Professor
P.G. & Research Dept. of Chemistry
Malabar Christian College, Calicut - 1

MINIMIZATION OF COD AND BOD IN DOMESTIC WASTE WATER USING CHLORELLA

SUBMITTED BY

❖ **DEVAMITHRA M (PWATSCH026)**

❖ **FATHIMA SHIRIL V (PWATSCH028)**

❖ **MARIYAM BINTH JAHFAR (PWATSCH030)**

❖ **NILA S (PWATSCH012)**

Under the guidance of

MS. GOPIKA A

Senior chemist, Water lab Calicut

Submitted to the University of Calicut in Partial Fulfilment of the Requirements

For the award of the Degree of

BACHELOR OF SCIENCE in CHEMISTRY



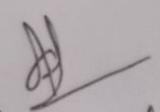
DEPARTMENT OF CHEMISTRY
PROVIDENCE WOMEN'S COLLEGE

CALICUT-09, 2021-22

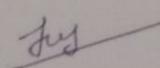
CERTIFICATE

This is to certify that this project entitled "MINIMIZATION OF COD AND BOD USING CHLORELLA" is submitted to the University of Calicut in partial fulfilment of the requirements for the award of the Degree of BACHELOR OF SCIENCE in CHEMISTRY at Providence Women's College, is a bonafide reward of the project carried out by DEVAMITHRA M (PWATSCH026), FATHIMA SHIRIL V (PWATSCH028), MARIYAM BINTH JAHFAR (PWATSCH030), NILA S (PWATSCH012) under guidance and supervision of Ms. Gopika A, Water lab, in the year 2021-2022.

DATE: May 2022


Dr. Asha Thomas
HEAD OF THE DEPARTMENT

EXAMINERS:

1. 
- 2.

Jeeja Rani A.T
Assistant Professor
P.G. & Research Dept. of Chemistry
Malabar Christian College, Calicut - 1

A Computational Study On Global Parameters Of Polyphenolic Compounds

Project report submitted to University of Calicut in partial fulfilment of the requirement for the award of the degree

Bachelor of Science in CHEMISTRY

Submitted by

AYSHA ZERIN

PWATSCH001

MEGHNA BABU

PWATSCH010

SONA K S

PWATSCH016

AMAYA N

PWATSCH021

SAHNA P T

PWATSCH035



Department of Chemistry

Providence Women's College, Calicut

May 2022

CERTIFICATE

This is to certify that the project titled "A Computational Study on Global Parameters of Polyphenolic Compounds" is the original work carried out by, Aysha Zerine (PWATSCH001), Meghna Babu (PWATSCH010), Sona K S (PWATSCH016), Amaya N (PWATSCH021), Sahna P T (PWATSCH035) for the award of the degree of Bachelor of Science in Chemistry of University of Calicut under my supervision and guidance at Department of Chemistry, Providence Women's College, Calicut.



Dr. Deepthi Jose
Assistant professor
Department of Chemistry
Providence Women's College Calicut



Dr. Sr. Asha Thomas
Head of the Department of Chemistry
Providence Women's College Calicut.

May 2022



Jeeja Rani A.T
Assistant Professor
P.G. & Research Dept. of Chemistry
Malabar Christian College, Calicut - 1

PROJECT REPORT

**TOPIC: EXTEND OF POLLUTION IN CHALIYAR RIVER BANK AND
REMEDIES FOR ITS MINIMISATION**

Submitted to the University of the Calicut in partial fulfilment of the
requirements for the award of Degree of
Bachelor of Science in Chemistry

By

Alphonsa P J

Reg. No PWATSCH020

Anjali Krishna T H

Reg. No PWATSCH024

Sreelakshmi Vinay A P Reg. No PWATSCH039

Suriya Thomas

Reg. No PWATSCH017

Dept. of Chemistry

Providence Women's College, Calicut



Under the Guidance of:

Gopika A,

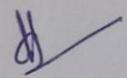
Senior Chemist

Water Lab, Kozhikode.

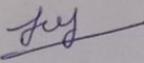
CERTIFICATE

This is to certify that the project work entitled "Extend of pollution in Chaliyar River Bank and Remedies for its Minimization" is submitted to the university of Calicut in partial fulfilment of the requirements for the award of the degree of Bachelor of Science in Chemistry at Providence Women's College, is a bonafide reward of the project work carried out by **Alphonsa P J, Anjali Krishna T H, Sreelakshmi Vinay A P, Suriya Thomas**, under the supervision and guidance of Gopika A.

DATE: May 2022


Sr. Asha Thomas
HEAD OF THE DEPARTMENT

EXAMINERS

1. 
- 2.

Jeeja Rani A.T
Assistant Professor
P.G. & Research Dept. of Chemistry
Malabar Christian College, Calicut -

PROJECT REPORT

TOPIC: EFFECTIVE DYE REMOVAL USING RICE HUSK IN TEXTILE
EFFLUENT

Submitted to the University of the Calicut in partial fulfillment of the
requirements for the award of Degree of
Bachelor of Science in Chemistry

By

RIYA SUNIL

Reg.no. PWATSCH004

EMIL MARY BINU

Reg.no. PWATSCH008

GAYATHRI KRISHNA M G

Reg.no. PWATSCH009

NANDA S

Reg.no. PWATSCH011

SANIKHA DINESH

Reg.no. PWATSCH014

Dept. of Chemistry

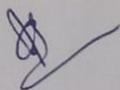
Providence Women's College, Calicut



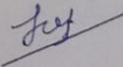
CERTIFICATE

This is to certify that the project work entitled " Effective dye removal using Rice husk in textile effluent" is submitted to the university of Calicut in partial fulfillment of the requirements for the award of the degree of Bachelor of Science in Chemistry at Providence Women's College, is a bonafide reward of the project work carried out by Riya Sunil, Emil Mary Binu, Gayathri Krishna M G, Nanda S and Sanikha Dinesh under the supervision and guidance of Gopika A.

DATE: May 2022


Sr. Asha Thomas
HEAD OF THE DEPARTMENT

EXAMINERS

1. 
- 2.

Jeeja Rani. A.T
Assistant Professor
P.G. & Research Dept. of Chemistry
Malabar Christian College, Calicut - 1

Synthesis of Schiff Bases and Study of Solvent Effects on Absorption Maxima

Project report submitted to University of Calicut in partial fulfillment of the requirement for the award of the degree

Bachelor of Science in CHEMISTRY

Submitted by

DILSHANA VK

PWATSCH002

RAMYASREE K

PWATSCH013

AISWARYA O

PWATSCH019

ANAMIKA K UDAY

PWATSCH023

FATHIMA HANAN E K

PWATSCH027



Department of Chemistry

Providence women's College, Calicut

March 2022

CERTIFICATE

This is to certify that the project titled “**Synthesis of Schiff Bases and Study of Solvent Effects on Absorption Maxima**” is the original work carried out by **Dilshana V K (PWATSCH002), Ramyasree K (PWATSCH013), Aiswarya O (PWATSCH019), Anamika K Uday (PWATSCH023), Fathima Hanan E K (PWATSCH027)** for the award of the degree of Bachelor of Science in Chemistry of University of Calicut under my supervision and guidance at Department of Chemistry, Providence Women's College, Calicut.

Station: Calicut

Date: 28/03/2022



Dr. (Sr.) Asha Thomas
Head of the department
Department of chemistry



Dr. Anu Jose
Assistant Professor
Department of Chemistry



Jeeja Rani A.T
Assistant Professor
P.G. & Research Dept. of Chemistry
Malabar Christian College, Calicut - 1

WATER QUALITY ANALYSIS OF SIXTEEN WELL WATER SAMPLES

PROJECT REPORT

SUBMITTED TO

UNIVERSITY OF CALICUT

In partial fulfillment of the requirement for the award of degree of
BACHELOR OF SCIENCE in CHEMISTRY

BY

ANJU THOMAS

- PWATSCH006

AISWARYA A O

- PWATSCH018

AMEESHA C M

- PWATSCH022

APARNA P S

- PWATSCH025

SANDRA T P

- PWATSCH036

SWETHA SATHEESH V

- PWATSCH040

UNDER THE GUIDANCE OF

Dr.(Sr.) ASHA THOMAS

Assistant Professor in Chemistry



**DEPARTMENT OF CHEMISTRY
PROVIDENCE WOMEN'S COLLEGE, CALICUT**

MAY 2022

CERTIFICATE

This is to certify that the project titled “ **WATER QUALITY ANALYSIS OF SIXTEEN WELL WATER SAMPLES**” is the original work carried out by Anju Thomas PWATSCH006 , Aiswarya A O - PWATSCH018,Ameesha C M-PWATSCH022, Aparna P S - PWATSCH025,Sandra T P-PWATSCH036, Swetha Satheesh V- PWATSCH040 B.Sc Chemistry, Providence Women’s College, Calicut under the guidance of **Dr.(Sr.) Asha Thomas** Ph.D, Head of Department of Chemistry, Providence Women’s College,Calicut for the award of the Degree of Bachelor of Science in Chemistry in the year 2021-22.

Calicut
04/05/2022


Dr.(Sr.)Asha Thoms
Department of Chemistry
Providence Women’s College


Jeeja Rani. A.T
Assistant Professor
P.G. & Research Dept. of Chemistry
Malabar Christian College, Calicut - 1

Providence Women's College

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Office : 0495-2371696, 2372487
Resi : 0495-2371059
E-mail : providencecollegecalicut@gmail.com
Website : www.providencecollegecalicut.ac.in



CARMEL HILL
MALAPARAMBA (P.O.)
CALICUT - 673 009

CERTIFICATE

This is to certify that the following students of I year Chemistry UG completed their project/ fieldwork as a part of their curriculum during the academic year 2021-22

ADHITHYA SAJI
ADRA S
AKHINA K KRISHNAN
ANAINA AZEEZ K T
ANANYA JAYAPRAKASH
ANJALIKRISHNA T C
ARYA K R
AVANI RAJEEV
AVANYA K P
AYISHA LIBA T K
FAHIMA A T
FATHIMA HANNA P T
GAYATHRI J P
GOPIKA SHANOJ
JANIS BOBBY
JASMINE K M
KRISHNA CHANDRA T
KRISHNA PRIYA V
LINDA S BABU
LIYA DENNY

LIYA K P
MANJIMA M
MEGHA K P
MEGHA V
MUFEEDA MARIYAM
NANDANA C T
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NANDANA VINOD
NANDHANA T K
NAYANA SHANMUGHAN M
RENA FATHIMA P A
SAGARIGA SURENDRAN K
SANIKA SUNIL M K
SHANIA NECTARINE MENDOZA
SHIJINA V
SHRADHA K YESUDAS
SREELAKSHMI S
SREYA SANTHOSH
YUDHIKA M



Joseph
Dr. Sr. Jaseena Joseph
Principal (PEN 470173)
Providence Women's College
Kozhikode - 673 009

Experiential Learning through Field Survey

**Department of Chemistry -2021-22
Providence Women's College Calicut**

A Preliminary Field Survey on the Perception of Local Public on Drinking Water Quality and Water Conservation

Report

Introduction

Water is one of the basic necessities of the humans and most important natural resources. Deteriorating water quality and emerging water scarcity is one of the greatest crises of this era. In addition to anthropogenic activities, climatic changes are also contributing to water pollution. Health issues due to the use of contaminated water is also increasing in an alarming rate. Water quality monitoring and ensuring safe drinking water to the citizens is crucial in environmental protection strategies. Kerala is a land blessed with high rainfall and large number of water bodies with an annual rainfall of 3000 mm. In spite of numerous awareness and water literacy programmes about 26.90 per cent of water sources in Kerala are completely polluted as per the study conducted by Kerala State Literacy Mission Authority (KSLMA). The present study was conducted to assess the knowledge of the respondents about drinking water quality, water pollution, water treatment techniques, sanitation and waterborne diseases and water conservation methods.

Objectives

1. Gain an understanding on the awareness level of local public on water quality and protecting groundwater quality
2. Evaluate the challenges in water governance through the perception of local public.
3. Create an awareness among the students about the water quality of their residential area.

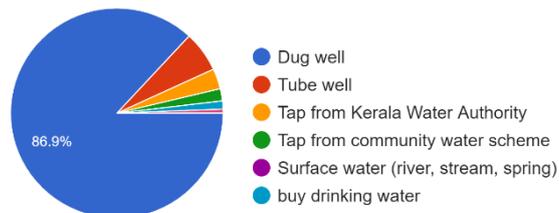
Methodology

Students conducted face-to-face interviews among 160 households in their residential area using structured questionnaire survey to collect data from the local public. The survey included questions to understand the water sources available to the citizens and

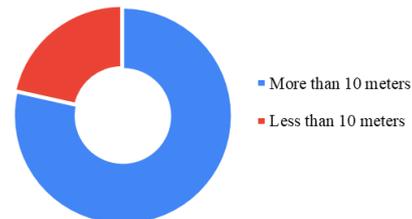
their awareness and perception on water treatment methods, water conservation and water borne diseases (Annexure 1) and the responses were recorded.

Results and Discussions

a. Source of drinking water: During the field survey, it was found that majority of the respondents depends on dug wells (87%) for drinking water. The high rainfall received in the place is recharging ground water. It was also found that majority of the respondents maintains a safe distance between dug well and septic tank.

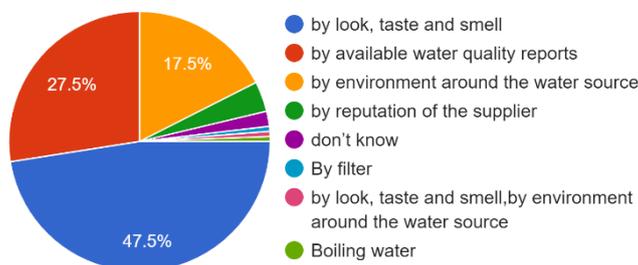


Source of drinking water

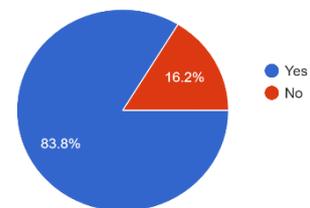


Distance of septic tank from dug well in metres

b. Water quality assessment and awareness on water quality: About 84% of the respondents participated in the survey is aware about the water quality assessment facilities available in their locality, but only 28% have tested their water to ensure the safety to use as drinking water. Majority of the respondents use water by its appearance, taste and smell.



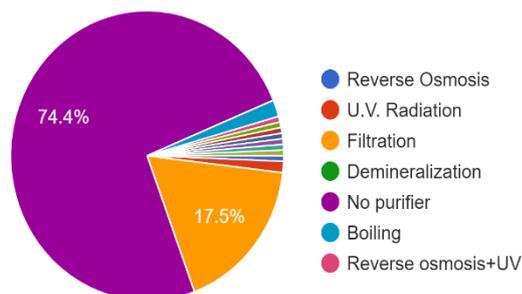
Strategy to ensure water quality



Awareness on water quality assessment facilities

c. Usage of water purifier at household:

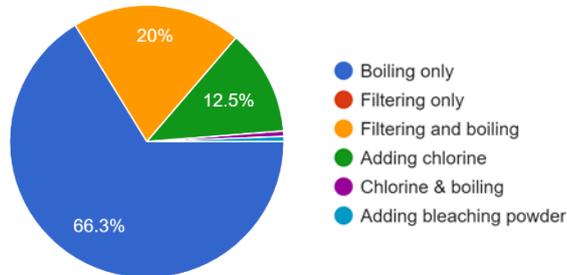
More than 70% of the respondents are not using water purifier at the house hold and among those who use the purifier, prevalent purification technology is filtration



Water purification techniques

d. Water quality during monsoon and summer

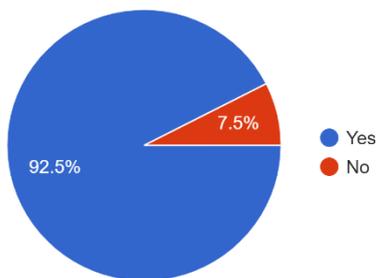
Water from the dug wells is not enough for the majority of the respondents during summer and they depend on water from other sources. But monsoon doesn't affect water quality much. The quality of drinking water is ensured during this period by boiling.



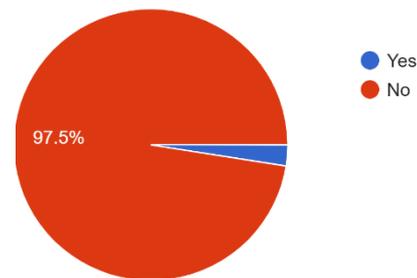
Household water purification techniques to ensure quality

e. Water borne diseases

Respondents are well aware of water borne diseases and occurrence of water born disease among the members of household is negligible.

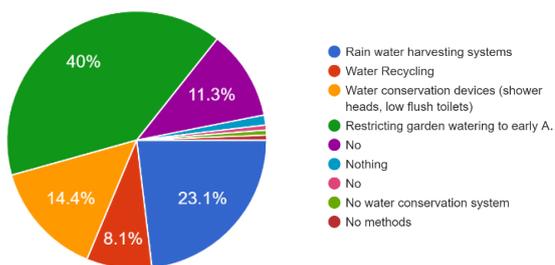


Awareness on water borne diseases

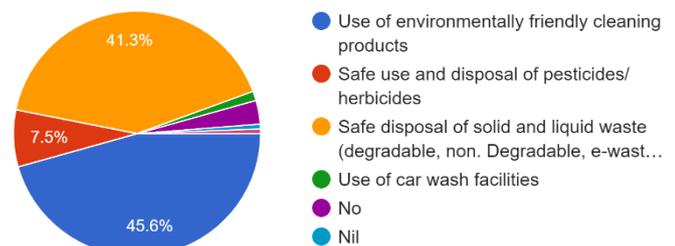


Occurrence of water borne

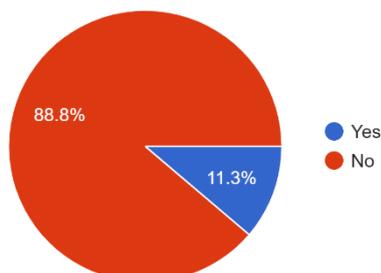
f. Water conservation and recharge



Water conservation strategies



Strategies to improve water quality



Water recharge at household

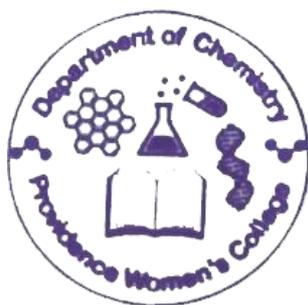
The survey result indicates that water conservation and recharging are not practised efficiently. The majority of the households participated in the survey depends on the groundwater resources. Hence it is highly essential to take necessary action to ensure the protection and sustainable use of groundwater resources. Public should be made aware of the vital need to protect, preserve and conserve water resources for the future. Measures should be taken to break the barriers between the local bodies and the public through knowledge sharing. Students can aid the local bodies to bridge the gap and enhance the water literacy of the public.

Limitations

The survey was done at the residential area of students and hence the data is not complete to represent a particular zone.

Conclusion

Majority of the respondents use dug well as the source of drinking water and are aware of water borne diseases. But the efforts to conserve water and recharge water resources is minimal. Hence more programmes should be organized to create awareness and provide facilities to ensure conservation of water resources. The survey helped the students to understand about the water quality of their residential area and the issues related with drinking water. Hence, they can come up with solutions to help the local public thus extending their knowledge to the society.



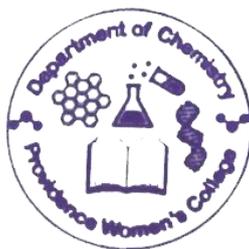

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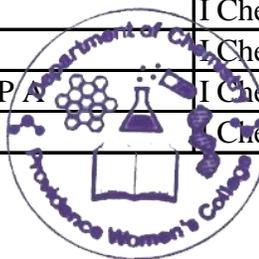
**Questionnaire for Preliminary Field Survey on the Perception of Local
Public on Drinking Water Quality and Water Conservation**

1. Name of the respondent:
2. Address with phone number:
3. Where does your drinking water come from?
 - Dug well
 - Tube well
 - Tap from Kerala Water Authority
 - Tap from community water scheme
 - Surface water (river, stream, spring)
 - Other (please specify)
4. How far (in meters) is your dug well from the septic tank?
5. Have you ever conducted quality test of available water for domestic use?
Yes / No
6. Are you aware of the water quality assessment facilities available in your area?
Yes / No
7. How do you ensure the quality your water is safe for drinking?
 - by look, taste and smell
 - by available water quality reports
 - by environment around the water source
 - by reputation of the supplier
 - don't know
8. Do you use a water purifier at home? If yes what is the purification technology used in your water purifier?
 - Reverse Osmosis
 - U.V. Radiation
 - Filtration
 - Demineralization
 - Others (Specify)
9. Do you face any issue with water quality during monsoon (heavy rain, flood)? If yes how you improve its quality?
10. Do you face any issue with water quality / scarcity during summer?
11. Are you aware of water borne diseases?
12. Has anyone in your household suffered from water borne disease in the past six months?
13. What are the household water treatment methods you practice?
 - Boiling only
 - Filtering only
 - Filtering and boiling
 - Adding chlorine

- Other (Specify)
14. Do you practice any of the water conservation measures in your home?
- Rain water harvesting systems
 - Water Recycling
 - Water conservation devices (shower heads, low flush toilets)
 - Restricting garden watering to early AM or PM
 - Other (specify)
15. Do you practice water quality improvement measures?
- Use of environmentally friendly cleaning products
 - Safe use and disposal of pesticides/herbicides
 - Safe disposal of solid and liquid waste (degradable, non. Degradable, e-waste, etc)
 - Use of car wash facilities
 - Other(specify)
16. Do you have any water recharge system at home?
Yes /No



List of students participated in the field survey		
Sl. No	Name	Class
1	Anaina Azeez K T	I Chemistry
2	Janis Bobby	I Chemistry
3	Krishna Chandra T	I Chemistry
4	Sagariga Surendran K	I Chemistry
5	Shania Nectarine Mendoza	I Chemistry
6	Adhithya Saji	I Chemistry
7	Anjalikrishna T C	I Chemistry
8	Ayisha Liba T K	I Chemistry
9	Fathima Hanna P T	I Chemistry
10	Gopika Shanoj	I Chemistry
11	Liya K P	I Chemistry
12	Manjima M	I Chemistry
13	Megha K P	I Chemistry
14	Nandana C T	I Chemistry
15	Nandana M M	I Chemistry
16	Nayana Shanmughan M	I Chemistry
17	Shradha K Yesudas	I Chemistry
18	Mufeeda Mariyam	I Chemistry
19	Adra S	I Chemistry
20	Ananya Jayaprakash	I Chemistry
21	Avanya K P	I Chemistry
22	Fahima A T	I Chemistry
23	Gayathri J P	I Chemistry
24	Krishna Priya V	I Chemistry
25	Linda S Babu	I Chemistry
26	Nandana Vinod	I Chemistry
27	Nandhana T K	I Chemistry
28	Sanika Sunil M K	I Chemistry
29	Shijina V	I Chemistry
30	Sreya Santhosh	I Chemistry
31	Yudhika M	I Chemistry
32	Akhina K Krishnan	I Chemistry
33	Arya K R	I Chemistry
34	Avani Rajeev	I Chemistry
35	Jasmine K M	I Chemistry
36	Liya Denny	I Chemistry
37	Megha V	I Chemistry
38	Rena Fathima P	I Chemistry
39	Sreelakshmi S	I Chemistry



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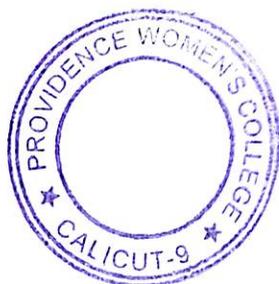
CARMEL HILL
MALAPARAMBA (P.O.)
CALICUT - 673 009

CERTIFICATE

This is to certify that the following students of II year Chemistry UG completed their project/ fieldwork as a part of their curriculum during the academic year 2021-22

AARSHA BABU C
AGNA JOJI
AJANYA K ANIL
AMAYA K R
AMAYA KS
AMRUTHA UNNI
ANJUSHA M
ANUGRAHA K
APARNA P
APARNA V
ARCHANA M K
ARYANANDA M
ASWANI V
AYISHA MIRSA
DEVIKA SASIKUMAR
GAYATHRI G K
GAYATHRI RAJ
HANIN SHARAF
HIBA FATHIMA
KEERTHANA N
MANUSMAYA P
MANYA R

NAFEESA THASNEEM
NAMITHA JOY
NANDANA M V
NIVEDHYA P P
POOJA S PRABHU
PRAVEENA VENUGOPAL
REEMA ROSARITA
REVATHI P
SAMANWAYA P T
SANDRA P M
SANGEERTHANA K
SHANA PARVIN
SHIVANI K M
SNEHA P
SNEHA SAJEEV
SONA S NAIR
SREDHA SREEDHARAN
SREELAKSHMI V
SWATHI P
SWATHI U
VYSHNAVI M
YUKTHA GOVIND S




Dr. Sr. Jaseena Joseph
Principal (PEN 470173)
Providence Women's College
Kozhikode - 673 009

Experiential Learning through Project Work

Department of Chemistry 2021-22

Providence Women's College Calicut

Preliminary Water Quality Analysis of Local Water Bodies

1. INTRODUCTION

Water quality refers to the chemical, physical and biological characteristics of water. It is a measure of the condition of water relative to the requirements of one or more biotic species and or to any human need or purpose. It is most frequently used by reference to a set of standards against which compliance can be assessed. In the present project physical and chemical properties of water from water resources near to the residence of students were analyzed & compared. The properties analyzed are the follows:

- ❖ Total Dissolved Solids
- ❖ Temperature
- ❖ pH
- ❖ Conductivity
- ❖ Turbidity

2. Materials and methods

Sampling and analysis: water sampling and analysis involves the collection of water samples and measurement for chemical and biological characteristics to determine its quality. These results are compared with water quality standards in regulations or guidelines to determine its use or the treatment required to make the water suitable for its intended use. Students were divided into five groups to collect the water samples from ten different sources and to do the analysis. The samples analyzed during this project are:

Sample No.	Source of the sample
1	House-1
2	Factory producing house hold goods
3	Milma agency
4	Bore well
5	House-2 near oil mill
6	NIT campus
7	River
8	Lake
9	Field-water used for irrigation
10	Co-operation pipe

3. RESULTS AND DISCUSSION

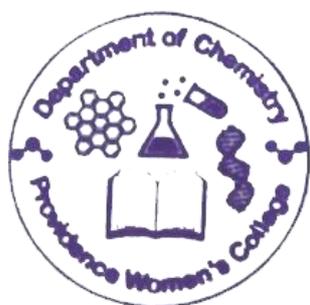
According to Indian Standards: 10500 (Drinking water specifications), the value for TDS should not be more than 2 g/l. If it exceeds this value, it might cause gastro intestinal irritation. However, it can be seen that the value of TDS is higher than this value in samples taken from river, lake and field.

Sample no.	TDS (g/l)	Conductivity (mS/cm)	Turbidity (NTU)	pH Value
1	0.435	0.0762	1.7	7.23
2	0.385	0.0678	1.9	6.58
3	0.382	0.0702	1.6	7.01
4	0.452	0.0781	2.8	7.25
5	0.464	0.0832	7.3	7.12
6	0.294	0.0513	2.6	7.22
7	2.865	0.1255	8.4	6.07
8	2.321	0.1023	7.5	6.14
9	2.116	0.0985	6.8	7.09
10	0.658	0.854	3.0	7.12

Conductivity is directly related to the total dissolved solids. Therefore, it can be seen that the value of conductivity is more in the samples possess high TDS. If we reduce TDS, the value of conductivity will automatically be reduced. According to Indian Standards: 10500 (Drinking water specifications), maximum value of turbidity should be 5 NTU. But here, many samples have higher value. This water is certainly not fit for drinking. The pH of most of the sample fall within the required value between 6.5 & 8.5. The pH of river water and lake water are slightly less than this value which shows water is acidic.

4. Conclusions

Study provides an understanding of sampling techniques and analytical tools to ensure the quality of water to the students. It also helps them to be aware of the polluted water bodies near their residence.




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2	Agna Joji	II Chemistry
3	Ajanya K Anil	II Chemistry
4	Amaya K R	II Chemistry
5	Amaya Ks	II Chemistry
6	Amrutha Unni	II Chemistry
7	Anjusha M	II Chemistry
8	Anugraha K	II Chemistry
9	Aparna P	II Chemistry
10	Aparna V	II Chemistry
11	Archana M K	II Chemistry
12	Aryananda M	II Chemistry
13	Aswani V	II Chemistry
14	Ayisha Mirsa	II Chemistry
15	Devika Sasikumar	II Chemistry
16	Gayathri G K	II Chemistry
17	Gayathri Raj	II Chemistry
18	Hanin Sharafa	II Chemistry
19	Hiba Fathima	II Chemistry
20	Keerthana N	II Chemistry
21	Manusmaya P	II Chemistry
22	Manya R	II Chemistry
23	Nafeesa Thasneem	II Chemistry
24	Namitha Joy	II Chemistry
25	Nandana M V	II Chemistry
26	Nivedhya P P	II Chemistry
27	Pooja S Prabhu	II Chemistry
28	Praveena Venugopal	II Chemistry
29	Reema Rosarita	II Chemistry
30	Revathi P	II Chemistry
31	Samanwaya P T	II Chemistry
32	Sandra P M	II Chemistry
33	Sangeerthana.K	II Chemistry
34	Shana Parvin	II Chemistry
35	Shivani K M	II Chemistry
36	Sneha P	II Chemistry
37	Sneha Sajeev	II Chemistry
38	Sona S Nair	II Chemistry
39	Sredha Sreedharan	II Chemistry
40	Sreelakshmi V	II Chemistry
41	Swathi P	II Chemistry
42	Swathi U	II Chemistry
43	Vyshnavi M	II Chemistry
44	Yuktha Govind S	II Chemistry



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