



# MARKAZ ARTS AND SCIENCE COLLEGE

(Affiliated to the University of Calicut)

Markazu Tharbiyyathil Islamiyyah, Athavanadu, Near Valanchery

P.O. KARTHALA, ATHAVANAD, PIN:679571, MALAPPURAM DT., KERALA

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## DEPARTMENT OF CHEMISTRY

## ANNUAL REPORT



2023 - 2024



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## ANNUAL REPORT 2023 – 2024

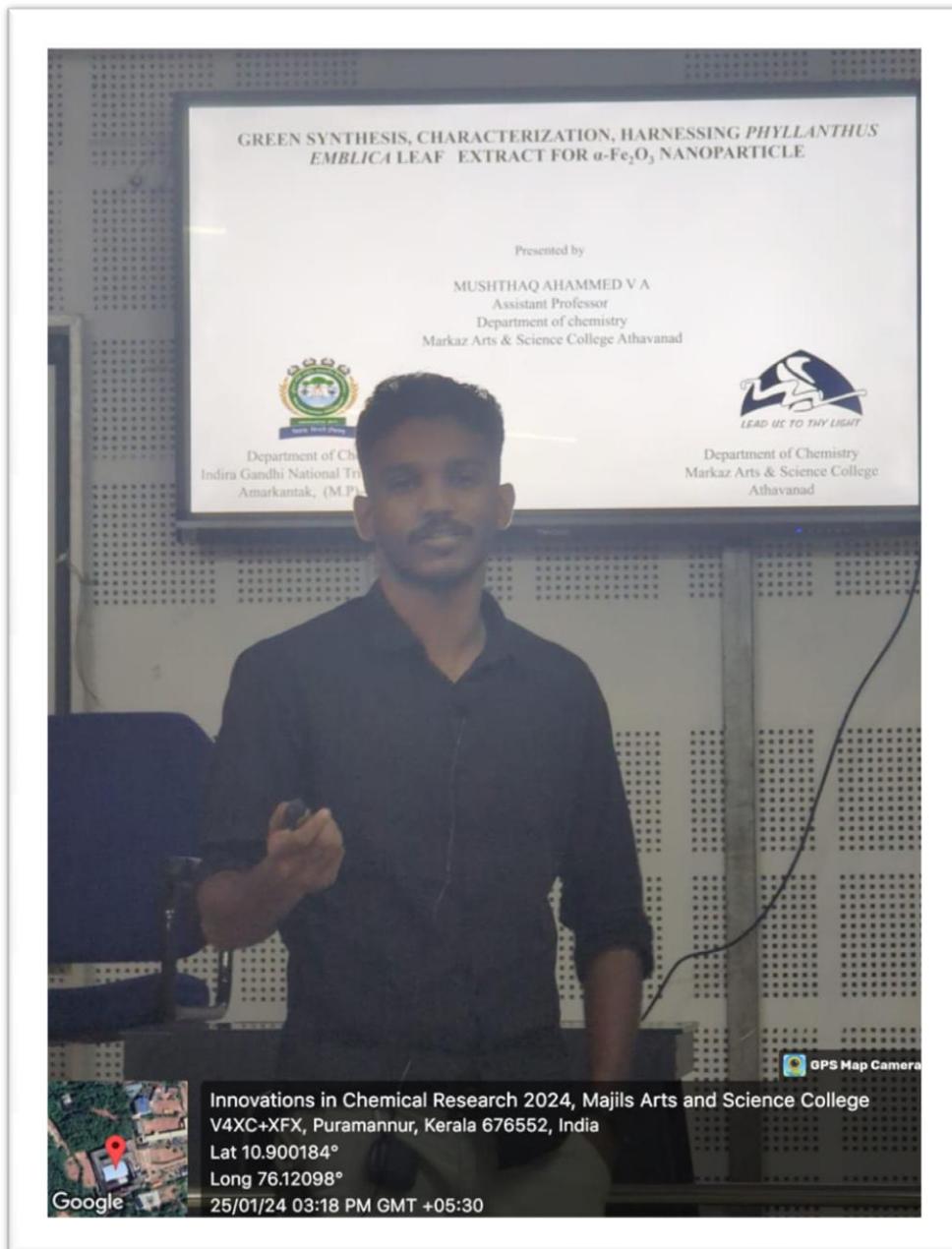
The college was reopened on 01/06/2023. The department have 8 faculty members. There are 75 students in which 15 boys and 60 girls. Percentage of results in the academic year is UG – 63.6 % and PG – 89.5%.

The faculty members of the department participated in various Seminars and Workshops.

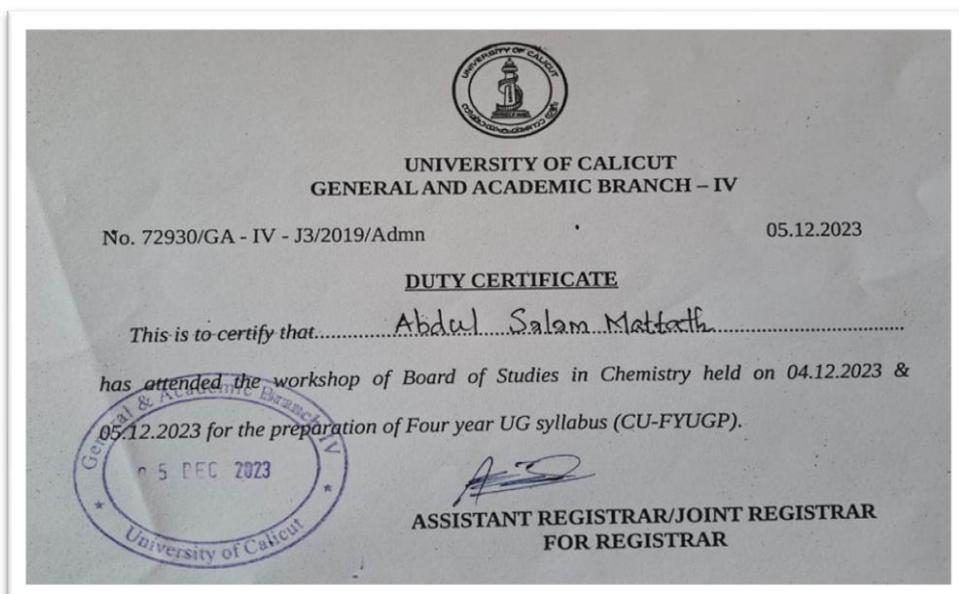
Dr. C.P Mohamed Kutty (Principal) was participated two FDP on NEP. Mr. Abdul Salam Mattath (HoD), Mohamed Hasim M, Asha P, Aswathy KP, Mubarak Raihana O, successfully completed two Faculty Empowerment Programme conducted by MES Kalladi College, Mannarkkad and Markaz Arts and Science College Athavanad. Unas AK and Musthaq Ahammed VA completed One Faculty Empowerment Programme.

Mr. Mushthaq Ahammed VA has presented a paper named “GREEN SYNTHESIS, CHARACTERIZATION, and HARNESSING PHYLLANTHUS EMBILICA LEAF EXTRACT FOR  $Fe_2O_3$  NANOPARTICLE” in the two days national seminar on innovations in chemical research ICR-2024, conducted by the postgraduate department of chemistry, Majlis Arts and Science College, Puramannur on 24<sup>th</sup> and 25<sup>th</sup> January 2024.

Mr. Abdul Salam Mattath has attended the workshop of Board of Studies in Chemistry at University of Calicut held on 04/12/2023 to 05/12/2023 for the preparation of Four Year UG syllabus.



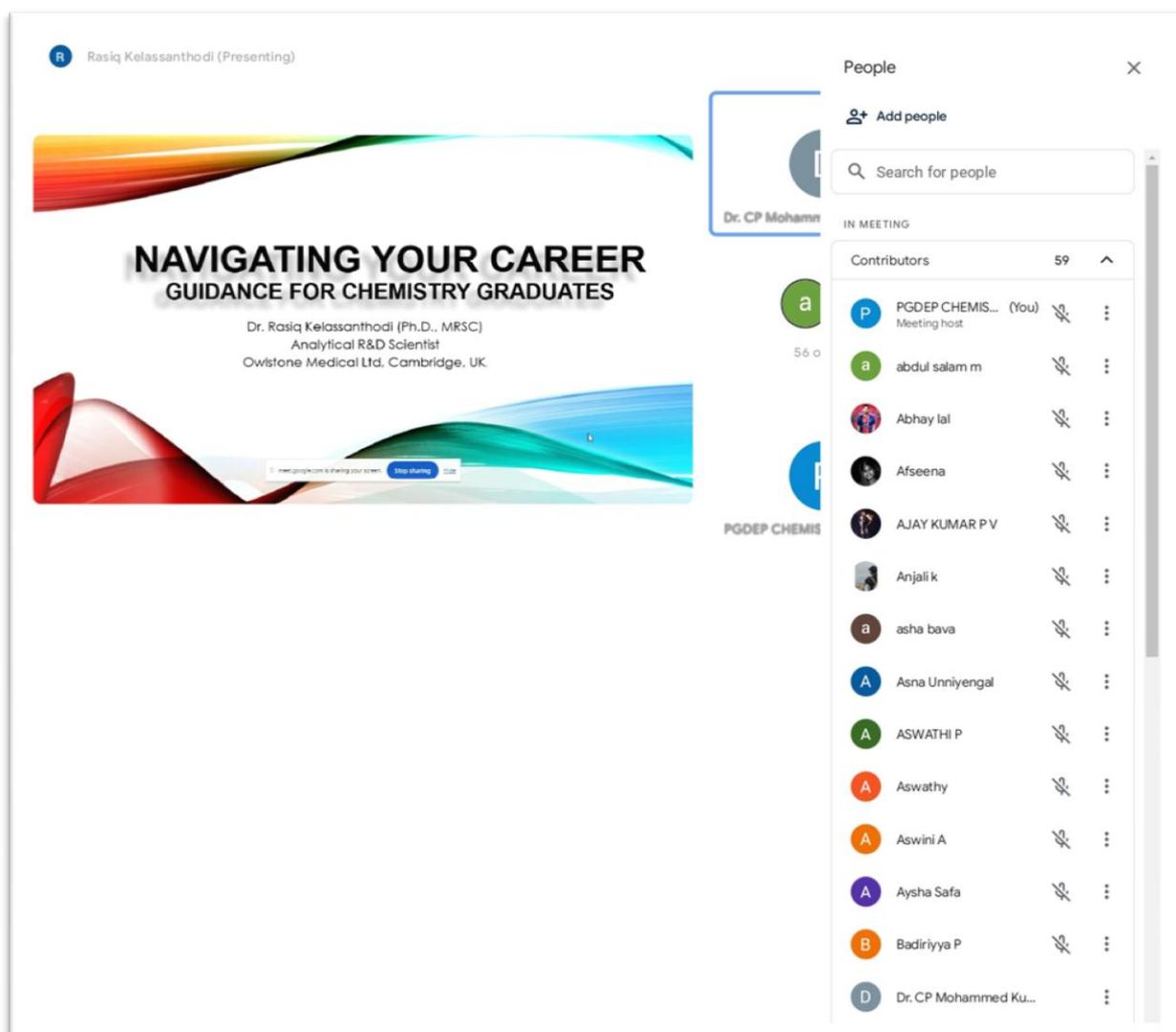
**Mushthaq Ahamed VA Presenting the Paper**



The department of Chemistry conducted various programmes in this academic year and the detailed report is given below.

### International Webinar

An international webinar on interactive career guidance in chemistry “Career Compass: Navigating your Path” was conducted on 27/05/2024 through google meet.. The programme was inaugurated by Dr. CP Mohammed Kutty, Principal, Markaz Arts & Science College. Dr. Rasiq Kelassanthodi, Analytical R & D Scientist, Owistone Medical, Cambridge, UK was presented the topic. The session was chaired by Head of the Department of Chemistry Mr. Abdul Salam Mattath. Total of 60 Students including outside colleges were participated in the programme.



The screenshot displays a Google Meet interface during a webinar. The main window shows a presentation slide with the following text:

**NAVIGATING YOUR CAREER GUIDANCE FOR CHEMISTRY GRADUATES**  
Dr. Rasiq Kelassanthodi (Ph.D., MRSC)  
Analytical R&D Scientist  
Owistone Medical Ltd, Cambridge, UK.

The right sidebar shows a list of participants under the heading "People". The list includes:

- PGDEP CHEMIS... (You) Meeting host
- abdul salam m
- Abhay lal
- Afseena
- AJAY KUMAR PV
- Anjali k
- asha bava
- Asna Unniyengal
- ASWATHI P
- Aswathy
- Aswini A
- Aysha Safa
- Badriyya P
- Dr. CP Mohammed Ku...

Markaz Arts and Science College, Athavanad  
PG Department of Chemistry  
*presents*



## **CAREER COMPASS: NAVIGATING YOUR PATH**

Join us for an interactive  
career guidance session in  
Chemistry with :

**Dr. RASIQ KELASSANTHODI**

Analytical R&D Scientist ,Owlstone  
Medical, Cambridge, UK

**27 MAY 2024**

**IST 11 AM**

**@ GOOGLE MEET**



**JOIN THE GROUP**

<https://chat.whatsapp.com/JMViAPZIfEs1Xwie6J0yO5>

Rasiq Kelassanthodi (Presenting)

## WHERE SHOULD I ?

**NATIONAL**

- CSIR / UGC NET/GATE
- DAT
- Inspire fellowship
- PMRF
- KSCSTE
- Maulana Azad fellowship
- Project JRF / SRF
- IITs, NITs, Central and State Universities / Research Institutes.

**INTERNATIONAL**

- Marie Curie/ DAAD/ Commonwealth/Fullbright/MEXT(Japan)/MHRD
- Direct University scholarships
- Euraxess / FindAPhD
- IELTS / PTE/ TOFEL / GRE

abdul salam m Unas Arattikal asha beva Rena Jasra Aswini A sayyid mohamm... 54 others

**Dr. Rasiq KT presenting the topic**

## **IGNITRA- Inauguration of Chemistry Association**

The Chemistry Association was inaugurated by Dr. Mohamed Jaseer Adattil, Principal in charge, Govt Arts and Science College for women Malappuram and presented a lecture on “A retrospective on Lithium Batteries- in Memories of John Bennister Goodenough” on 27/02/2024. Chemistry Association Secretary Mohamed Haseen K P delivered the welcome speech. Presidential address was delivered by our Principal Dr. C.P Mohamed Kutty. Mr.Abdul Salam Mattath , HoD , Department of Chemistry and Prof. A.K. Unas, Associate professor, Department of Chemistry conveyed felicitation for the programme. First year PG student Nadeer K A concluded the programme by a vote of thanks.





**Inaugural Session of 'IGNITRA'**

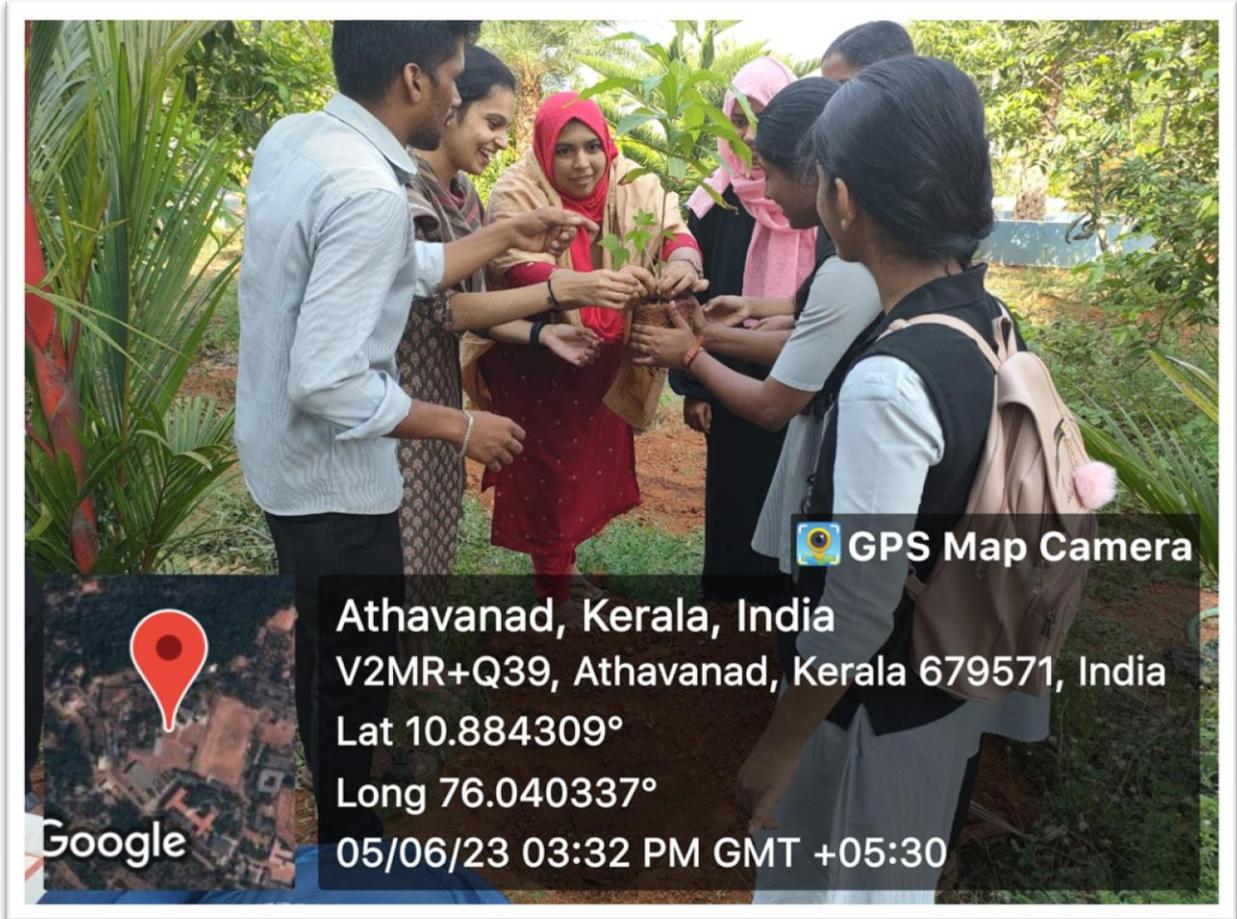


**Dr. Mohamed Jaseer Adattil Presenting the topic**



### **Celebration of World Environment Day**

In connection with world Environment day the Department of Chemistry conducted a programme on 05/06/2023. Tree plantation done by teachers and students in the campus. An awareness class was given to the students based on the theme “Solutions to the Plastic Pollution.



**Tree Plantation on World Environment Day**

## Celebration of World Ozone Day

In connection with world ozone day department of chemistry conducted a college level quiz competition on 15/09/2023 at Seminar Hall. Mr. Mohamed Hasim, Asst. Professor and Shifa P (3<sup>rd</sup> BSc Student) were the coordinators. A total of 17 students participated in the competition. Abdul Salam Mattath, Head of the Department, Department of Chemistry distributed the prizes for the winners.



Ozone day – Quiz Competition



## Celebration of National Science Day

As a part of science day celebration, Department of Chemistry, Markaz arts and science college, Athavanad conducted a science expo namely Boothakkannadi on 28<sup>th</sup> February 2024 . All degree and PG students of Chemistry department participated in the programme. Prof. A.K. Unas was the coordinator of the programme and provided necessary instructions to the students. First year degree and PG students actively engaged in conducting experiments and showcasing it to parents and other students of the college. Different variety of experiments like lava lamp , Elephant toothpaste , Dancing sodium , silver mirror , Artificial blood etc were demonstrated by our students.

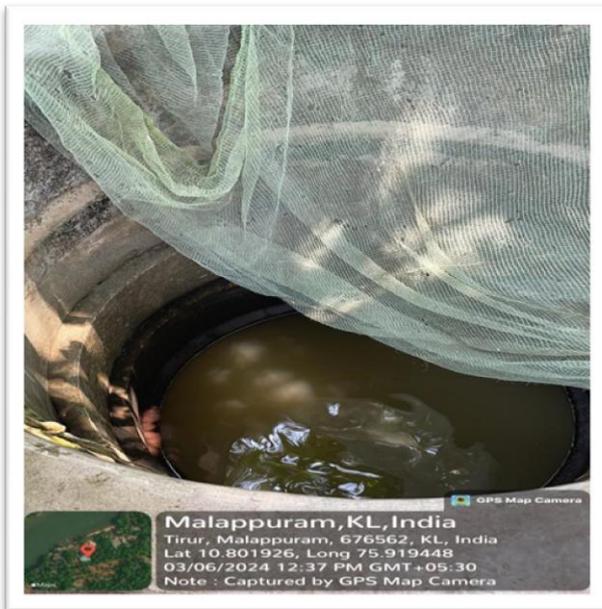




**Parents and Students visiting the exhibition**

### **Celebration of World Water Day and Water quality Analysis**

Department of Chemistry, Markaz arts and science college, Athavanad conducted a training on water analysis. The Programme was conducted on 22<sup>nd</sup> March 2024 as a part of world water day celebration at our water lab. Students collected water samples from different areas especially from drinking water scarce areas as part of extension activities. First year degree and pg students participated in the programme .The faculties Mubarak Raihana.O , Mushtaq Ahammed V.A and Aswathy K.P guided them . First year Msc student Mohamed Haseen was demonstrated the instruments to the students. The parameters like colour, odour, pH, TDS etc. were analysed.



**Training on Water Quality Analysis**

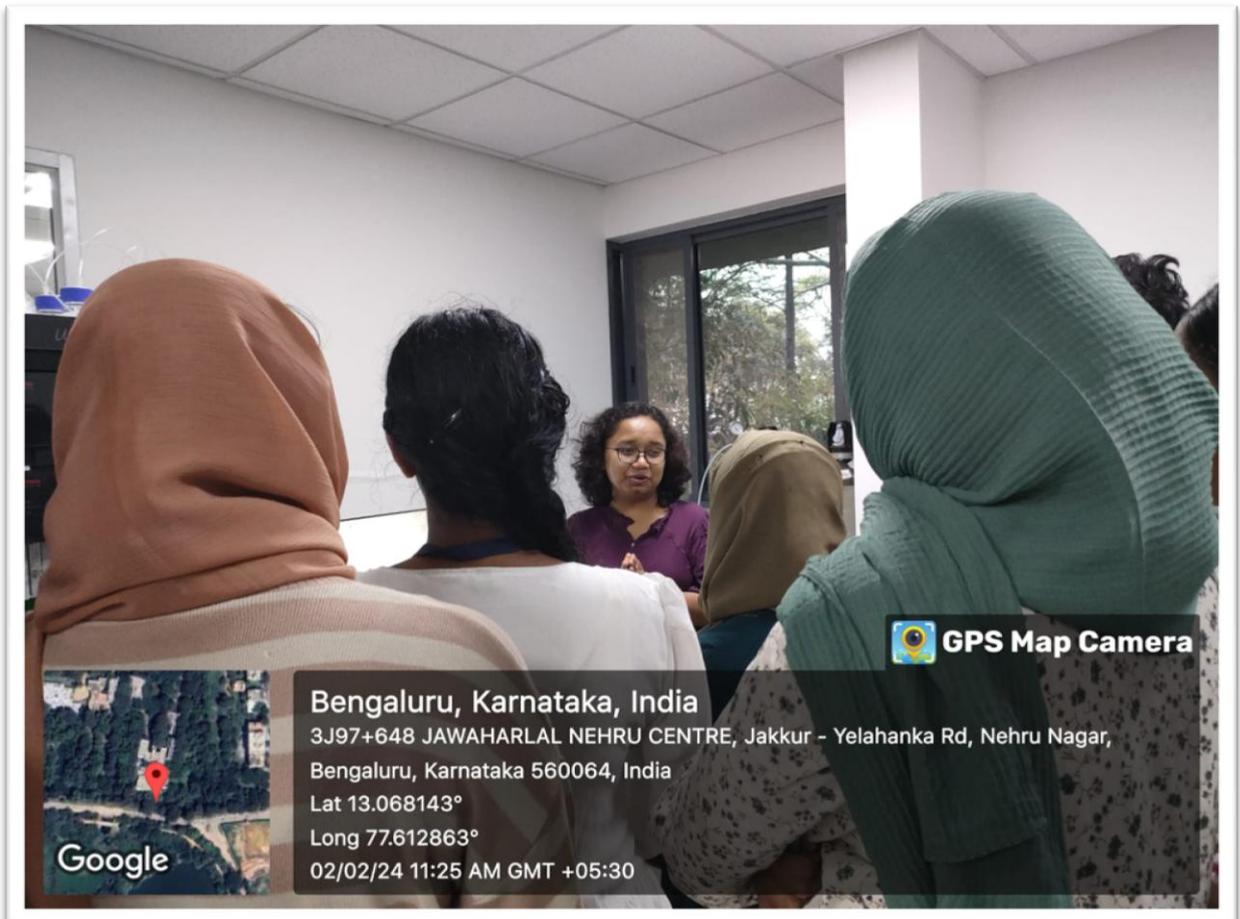
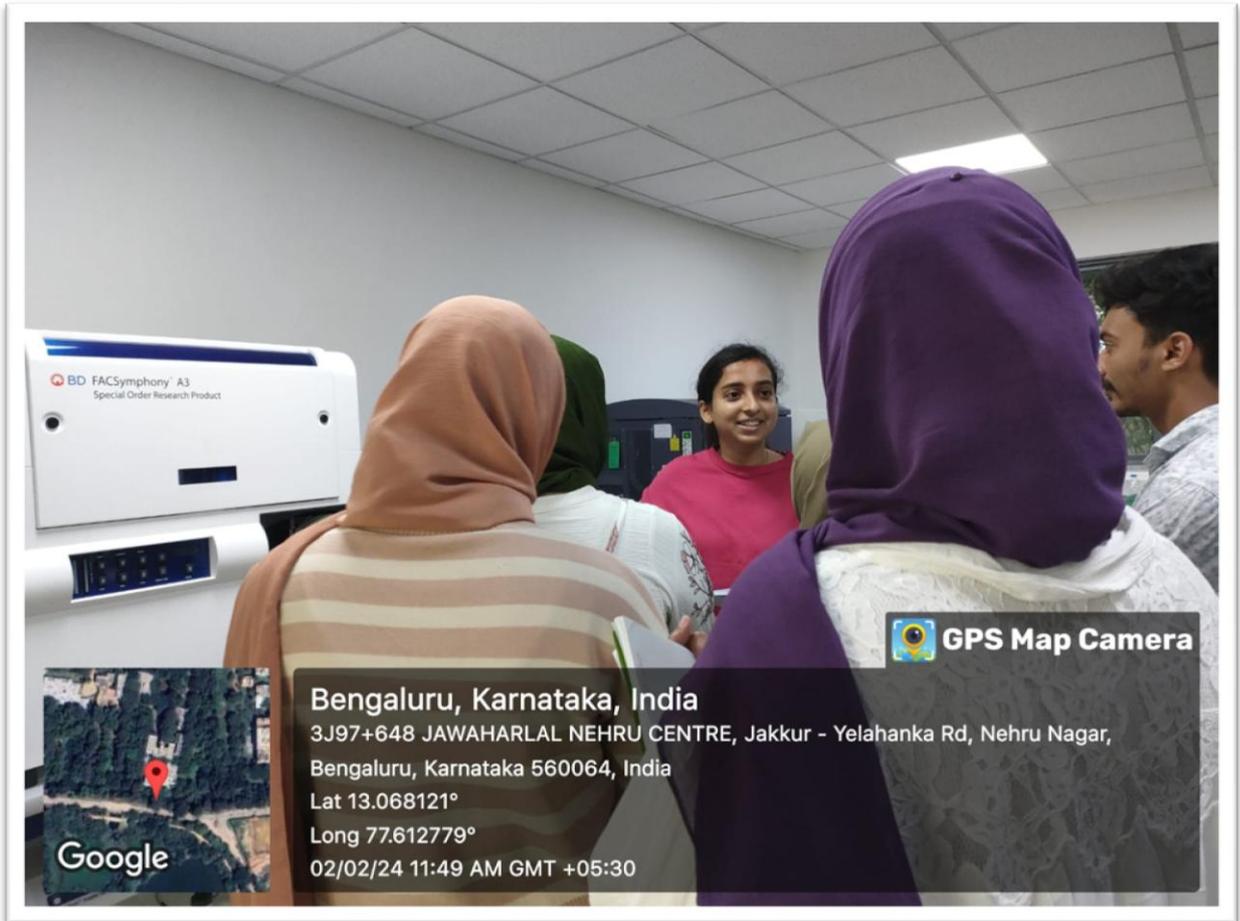
## Certificate Course

The Department of Chemistry introduced a Certificate course of 30 hour duration on “MZCHEPC23 – Physico chemical Analysis of Water” in the year 2023 – 2024. The Board of Studies of Certificate Course was formed by including the skilled experts in the relevant field. The Course includes both theory and practical sessions and by completing this course the students were capable for identification and analysis of quality of water. Thirty Four students were completed the course and awarded with the certificate.

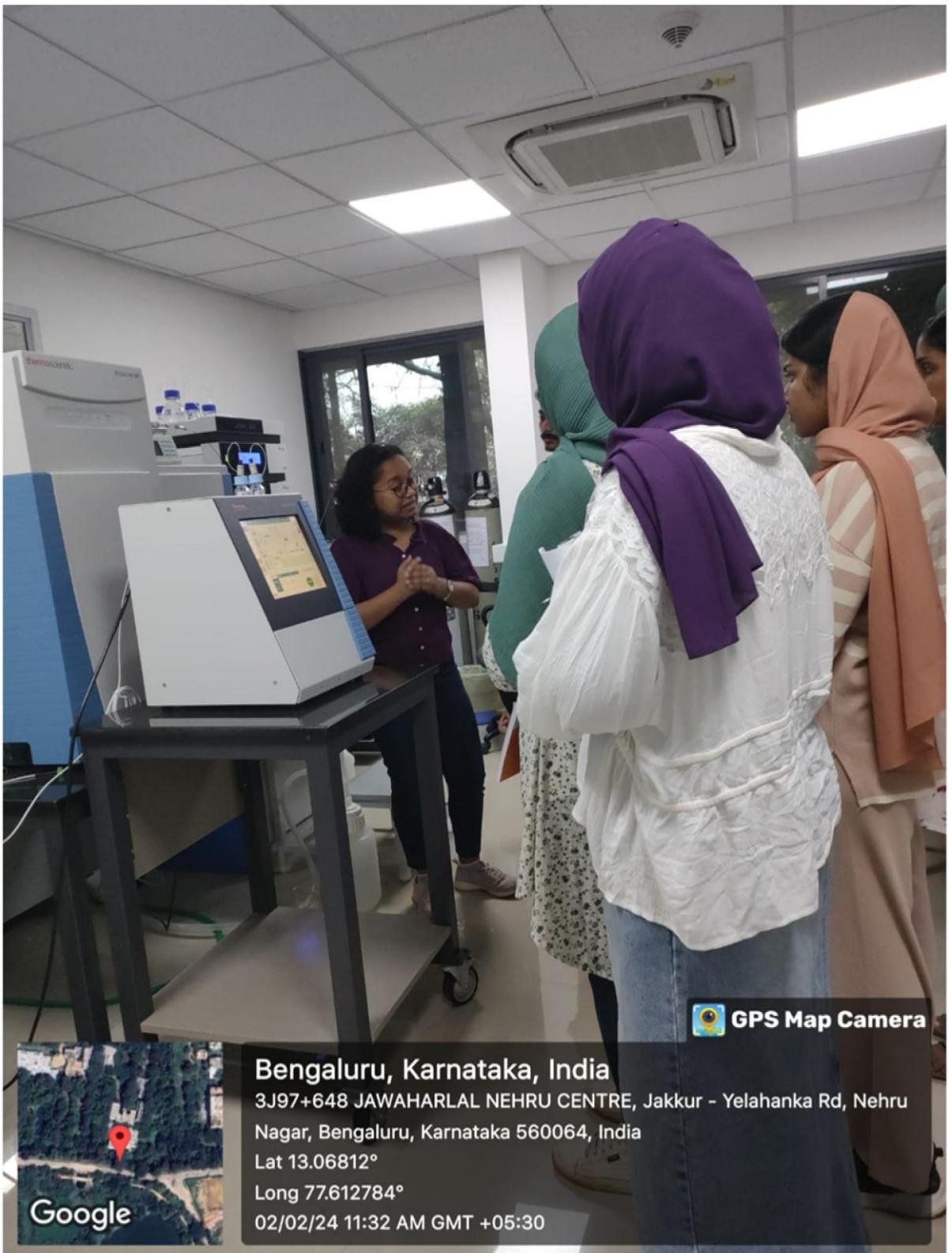
## Institutional Visit

Twenty Four students from third year BSc Chemistry and Second year MSc Chemistry were visited Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR) Bengaluru and RV College of Engineering Bengaluru on 02/02/2024. Abdul Salam Mattath, Aswathy KP and Mubarak Raihana O (Asst. Professors, Dept of Chemistry) were accompanied with the students. This visit helped the students to get a scientific and research exposure.





**Institutional Visit at JNCASR**



 **GPS Map Camera**



Google

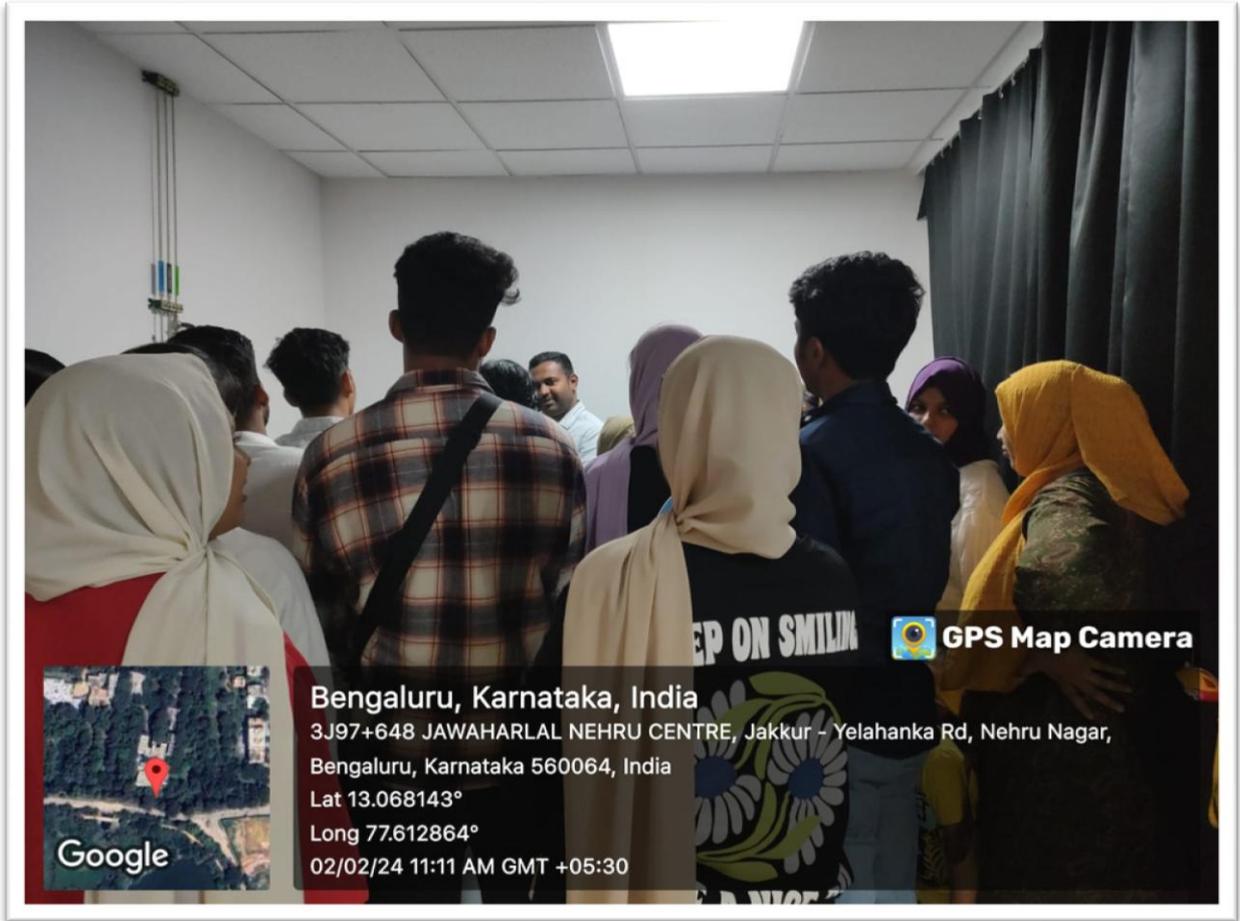
**Bengaluru, Karnataka, India**

3J97+648 JAWAHARLAL NEHRU CENTRE, Jakkur - Yelahanka Rd, Nehru Nagar, Bengaluru, Karnataka 560064, India

Lat 13.06812°

Long 77.612784°

02/02/24 11:32 AM GMT +05:30

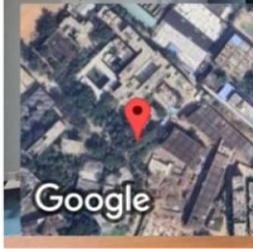


**Institutional Visit at JNCASR Bengaluru**



**Institutional Visit to RV College, Bengaluru**





**Bengaluru, Karnataka, India**  
PG Studies Block, RVCE, RV Vidyaniketan, Mailasandra, Bengaluru, Karnataka  
560059, India  
Lat 12.923779°  
Long 77.501255°  
02/02/24 03:01 PM GMT +05:30



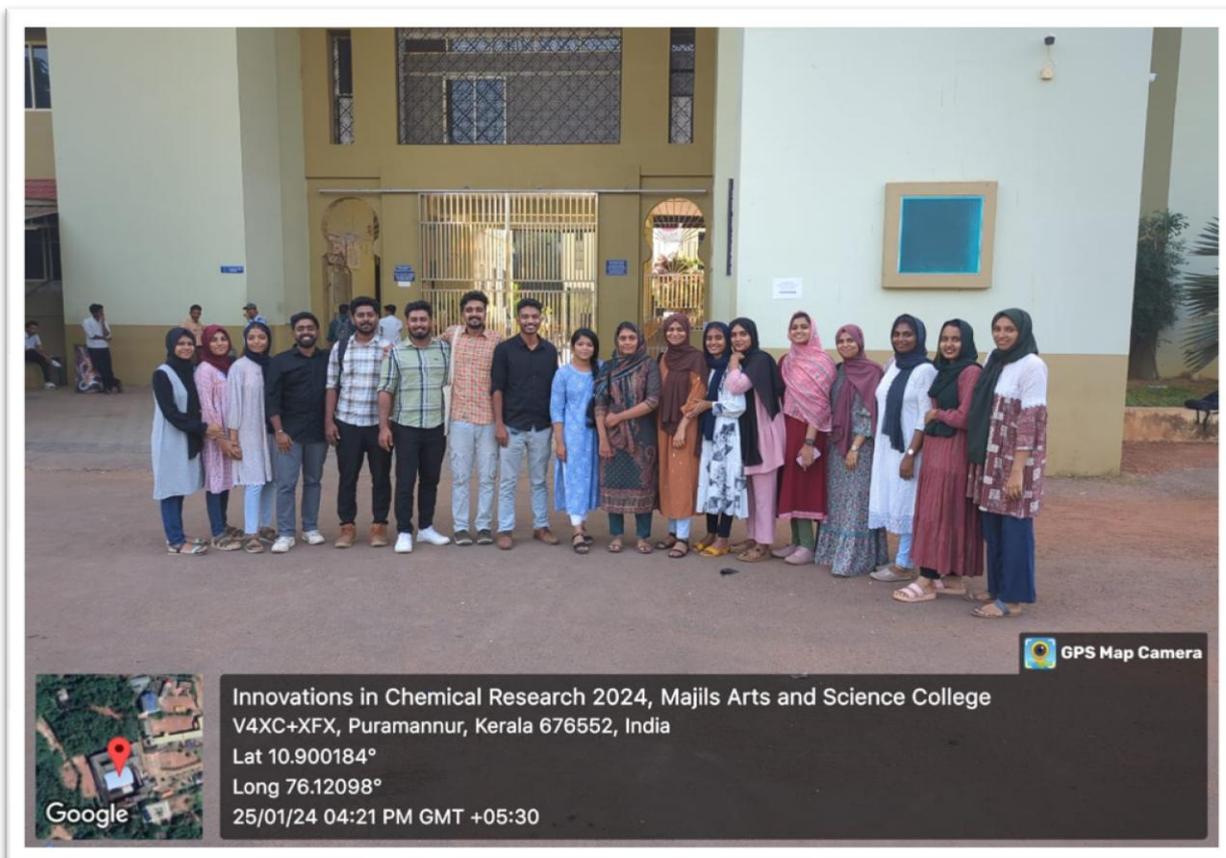
**Bengaluru, Karnataka, India**  
PG Studies Block, RVCE, RV Vidyaniketan, Mailasandra, Bengaluru, Karnataka  
560059, India  
Lat 12.923779°  
Long 77.501255°  
02/02/24 03:07 PM GMT +05:30



**Institutional Visit at RV College Bengaluru**

### **Students Participation in Seminar**

Seventeen Students from first year MSc chemistry students attended in the two days national seminar on innovations in chemical research ICR-2024, conducted by the postgraduate department of chemistry, Majlis Arts and Science College, Puramannur on 24<sup>th</sup> and 25<sup>th</sup> January 2024.



**Students of first year PG attending seminar at Majlis College Puramannur**

## Publication

A paper on “Analysis of Drinking Water Quality at Kuttippuram” has published in International Journal of Computational Engineering Research (IJCER) by Dr. CP Mohamed Kutty, Mubarak Raihana, Nida T and Seenathunnisa .



ISSN (e): 2250 – 3005 || Volume, 14 || Issue, 1 || Jan. - Feb. – 2024 ||  
International Journal of Computational Engineering Research (IJCER)

### Analysis of Drinking Water Quality at Kuttippuram

Nida.T, Seenathunnisa, Mubarak Raihana, C.P.Mohamed Kutty

Department of Chemistry, Markaz Arts And Science College, Athavanad, Malappuram, Kerala, India

#### ABSTRACT

A preliminary analysis of drinking water samples collected from Kuttippuram of Malappuram were conducted in order to know the effects of flood on drinking water after 5 years. Samples of water were collected from different sources like open wells and tube well. The physical parameters and chemical parameters were carried out. Most of the parameters like conductivity, total dissolved solids, dissolved oxygen, calcium hardness and magnesium hardness were found within permissible limits. And more than 99% of samples were found fit for drinking purpose which indicates that the water quality has survived from the adverse effect of the flood during 2018.

**Key Words:** Drinking water quality-Physical and Chemical analysis-effect of flood

Date of Submission: 25-02-2024

Date of acceptance: 08-03-2024

#### I. INTRODUCTION

Safe and readily available drinking water is the primary need of every human being. The task of delicate balancing ratio of available and exploitable water resources and sustaining their quality is most relevant in our country, where rainfall distribution is uneven and confined to 3-4 months in a year. The only major source of water availability in Kerala is the annual rainfall, and the per capita water availability through rains in the state is less than Maharashtra and Rajasthan<sup>1</sup>. Acute shortfall of rain in monsoon, poor watershed management, lavish use of water for domestic and agricultural purposes affect the naturally existing dynamic equilibrium among the environmental segments, leading to a state of pollution of water. The quality of water is of vital concern for mankind since it is directly linked with human welfare<sup>5,6</sup>. It has been reported that in the developing countries, pollution of ground water may cause 80% of human diseases and WHO has estimated that nearly 5 million deaths occur every year from polluted drinking water<sup>7</sup>.

Floods are playing greater role in causing environmental problems in an area. These cause damage to the drainage systems which results in raw sewage to spill out into bodies of water. Flood water picks up numerous contaminants from roads, farms, factories and storage building, including sewage and chemicals. 80% of Kuttippuram town has been badly affected by the current devastating flood and torrential rains. 40% houses, animals, household items and other belongings were swept away by heavy flood in Kuttippuram. Around 10 houses were totally destroyed while about 400 were damaged. After flood people in Kuttippuram were suffered a lot of problems with drinking water. However, during these last years the five quality of water has been improved.

The present study is aimed to evaluate how much drinking water quality has improved in Kuttippuram after flood and their possible remedial measure and recommendation to make the water fit for human consumption.

## **Department PTA**

One Department PTA meeting for third semester UG, second semester UG, and first semester UG were conducted.

Concluding this report, I express my heartfelt gratitude to the management, principal and all members of teaching and non teaching staff, parents and students of chemistry department for active cooperation and assistance. Thank you

Abdul Salam Mattath



**2023 - 2024**