

Best Practice 2

Title of the Practice: **Water Testing Service**

Objectives:

- To conduct water testing for its potability.
- To serve the public at nominal charges by providing safe and reliable water analysis services.

Purpose:

The Water Testing Service is an extension activity of the Department of Microbiology, University College, Mangalore. Water is a basic necessity for everyone, and ensuring its safety is vital for maintaining good health and preventing waterborne diseases. This practice aims to make water testing accessible and affordable for the public, industries, academic institutions, and research projects.

Description:

- This service was initiated in 2008 by Dr. Gayatri Devaraj, former Head of the Department, and is currently coordinated by Dr. Bharathi Prakash. It was formally extended to the general public in April 2015.
- The testing team includes dedicated laboratory technicians, Mrs. Kalavathi and Ms. Rakshitha. All charges collected for water testing are deposited into the designated Mangalore University Fund through challans. Till November 2024, the service has generated a total revenue of ₹ 8,12,608/-.
- Water samples are received from various sources, including homes, apartments, industries, schools, colleges, and for national and international research projects. Most samples come from wells and borewells.

Types of Tests Conducted:

- **Physical Tests:** Turbidity, Colour, and Odour
- **Chemical Tests:** Total Hardness, pH, Fluoride, Chloride, Iron, Nitrate
- **Microbiological Tests:** Faecal Coliforms (MPN – Presumptive, Confirmatory, and Completed tests)

Charges:

- ₹ 400 + GST for each chemical or microbiological water test. Payments are made via challans to Mangalore University's Account at Karnataka Bank, near the college.

Turnaround Time:

- Physical and chemical test reports: Within 2 hours.
- Microbiological MPN test reports: 3 days (due to multi-step testing).

All records of water testing are **well documented on a monthly basis**.

Statistics for Academic Year 2023-24:

Month	No. of Samples	Amount (₹)
Aug-2023	31	14,632
Sep	09	4,248
Oct	14	6,608
Nov	23	10,856
Dec	26	12,272
Jan	13	6,136
Feb	24	11,328
Mar	56	26,432
Apr	30	14,160
May	45	21,240
June	14	6,608
July	19	8,968
Total	304	1,43,488

Evidence of Success:

The service has received **excellent response** from the local community. Many residents approach the department with concerns such as:

- Unpleasant smell or colour in water.
- Contamination due to animals (cats, dogs, birds, snakes) falling into wells.
- Water quality testing after digging new wells or borewells.
- Suspected drainage water seepage.
- Checking water quality after long-term storage or algal blooms.

This practice helps prevent waterborne diseases and ensures community health. Ideally, all drinking water sources should be tested at least **twice a year** (pre- and post-monsoon) to ensure safety.

The significant revenue generated and continuous demand for the service highlight its impact and success in addressing a vital public health need.

Additionally, the department received a **Felicitation Letter from Mangalore Corporation** appreciating its contribution to community service.

Problems encountered and resources required:

- **Current Limitation:** The water testing service operates within the Microbiology Laboratory itself. During regular practical sessions and classes, simultaneous testing becomes cumbersome and disrupts academic activities.
- **Resource Requirement:** A **dedicated laboratory space** in the vicinity of the Microbiology Department is needed to ensure smooth functioning, minimize disturbance to students, and enhance service efficiency.

All necessary materials and chemicals for testing are currently provided by Mangalore University. With an independent, well-equipped space, the department could expand and improve its water testing services further.

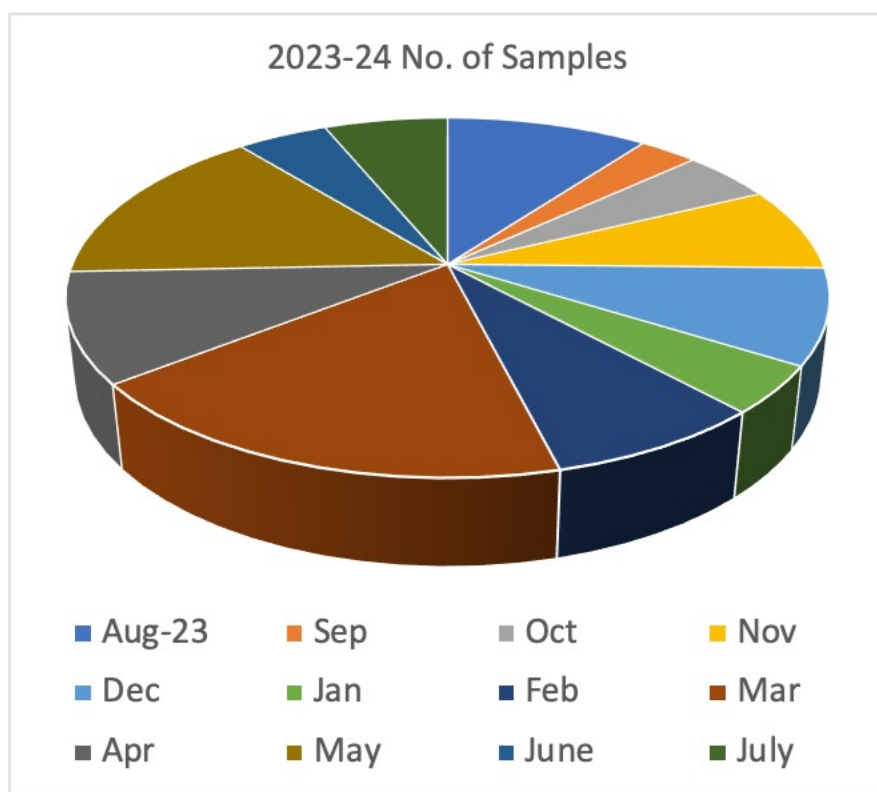
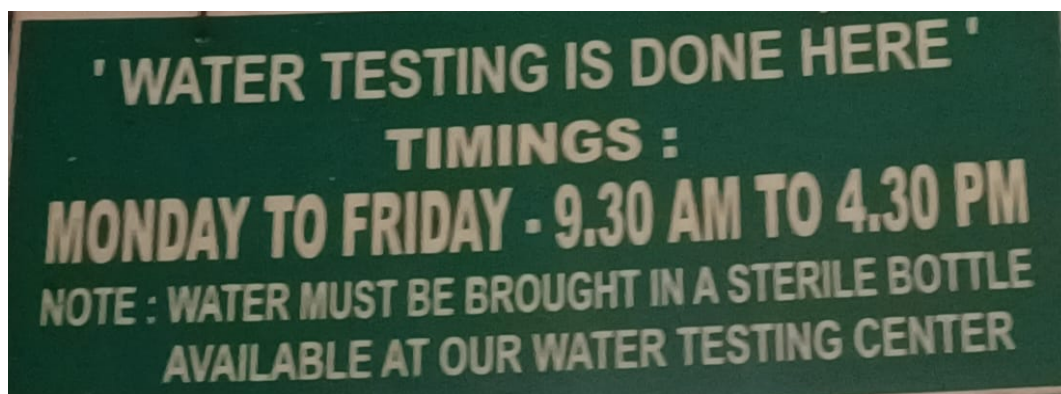


Fig. Pie chart showing monthwise water samples tested at our Microbiology department.



A Board of water testing service near Microbiology Department.

Principal
University college, Mangalore

Coordinator, Water testing service
Department of Microbiology



**Principal
University college, Mangalore**



**Coordinator, Water testing service
Department of Microbiology**



Staff of Microbiology Dept.

Month wise details of Water Testing recorded in the Register

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					1505 present				
11.	Rohith				10000	10000	10000	10000	10000
	Rohith Kambala, Mangalore	19/12/2023	055021	472/-	well water	potable			
12.	Anantharama Heralda				10000	10000	10000	10000	10000
	Monragaddu - Mangalore	19/12/2023	055020	472/-	well water	potable			
13.	Pradap Kumar (Hill Hill Palu)				10000	10000	10000	10000	10000
	Bejar Mangalore	19/12/2023	055022	944/-	Bore well	potable			
14.	R. Ganesh Shreey				10000	10000	10000	10000	10000
	Hill Hill Palu, Bejar Mangalore	20/12/2023	055023	944/-	old well	potable			
15.	Usha Kiran Apartment owners Association	21/12/2023	055024	472/-	Bore well	potable			
Total 26 water sample test -					13,272/-				
					81				
					11/12/24				
					11/12/24				
					Head of the Department of Microbiology				
					UNIVERSITY COLLEGE				
					Hampi Nagar Mangalore - 575011				