



Shri Shivaji Education Society Amravati's

Science College, Nagpur

Advanced Water Testing Kit Development for On-Field Analysis

Academic Session – 2022-23

Introduction:

The Chemistry Department in collaboration with the Shivaji Innovation and Incubation Centre has successfully developed an Advanced Water Testing Kit for on-field water analysis. This innovative kit allows the rapid analysis of 15 water parameters within a mere 20 minutes, marking a significant advancement in both theoretical and practical approaches to various water experiments.



Methodology:

The development process involved a multidisciplinary team of experts from the Chemistry Department and the Shivaji Innovation and Incubation Centre. The kit utilizes cutting-edge technologies to expedite on-field water testing, providing efficient and accurate results.

Key Features:

1. Rapid Analysis: The Advanced Water Testing Kit enables the analysis of 15 water parameters within a short span of 20 minutes, offering quick and reliable results for on-field applications.

2. Multifunctional Application: The kit is designed to cover a wide range of water parameters, enhancing its versatility for various research and practical experiments.

3. Innovation in Theory and Practice: The development of this kit represents a groundbreaking innovation in both theoretical and practical approaches to water testing, contributing to advancements in the field of chemistry.

4. Collaboration with Other Institutes: The faculty has generously shared this innovative kit with other educational institutions, fostering collaboration and knowledge exchange in the academic community.

Alignment with UNESCO Goals:

The Advanced Water Testing Kit aligns with UNESCO's Sustainable Development Goals, particularly those related to clean water and sanitation (Goal 6). By providing a rapid and efficient method for on-field water analysis, the kit contributes to ensuring the availability and sustainable management of water for all.



Distribution to Educational Institutes:

The Water Testing Kit was distributed to various educational institutes affiliated with RTM Nagpur University, SGB Amravati University, and Gondwana University, and also to the Environmental Agency. This strategic dissemination aimed to extend the benefits of the project to a broader academic community and foster collaboration in the realm of water quality assessment.

Demonstration Sessions:

Dr. Sarang S. Dhote conducted comprehensive demonstration sessions for students in all institutes that acquired the Water Testing Kit. The sessions provided insights into the proper usage of the kit, interpretation of results, and an overall understanding of water quality parameters. These demonstrations played a crucial role in ensuring that the end-users could utilize the kit effectively.

Hands-on Training on World Water Day:

To commemorate World Water Day on March 25, 2023, hands-on training sessions were organized under the guidance of Dr. Yogita K. Meshram and Dr. Sarang S. Dhote. These sessions allowed students to actively engage with the Water Testing Kit, further enhancing their practical skills. The World Water Day event provided a platform for students to apply their knowledge in a meaningful and timely context.

Conclusion:

The collaboration between the Chemistry Department and the Shivaji Innovation and Incubation Centre has yielded a groundbreaking Advanced Water Testing Kit. This kit not only expedites on-field water analysis but also aligns with UNESCO goals, showcasing its broader impact on addressing global challenges related to water quality and sanitation. The willingness to share this innovation with other institutes demonstrates a commitment to advancing scientific knowledge and fostering collaborative efforts within the academic community.



Figure 1- Distribution of Water Testing Kit on 25/03/2023



Figure 2- Demonstration of Advanced On Field Water Testing Kit by Dr. Sarang Dhote @ J. D. Patil Sangludkar Mahavidyalaya, Darpur Dist. Amravati, [M.S.], India on 13/11/2022.

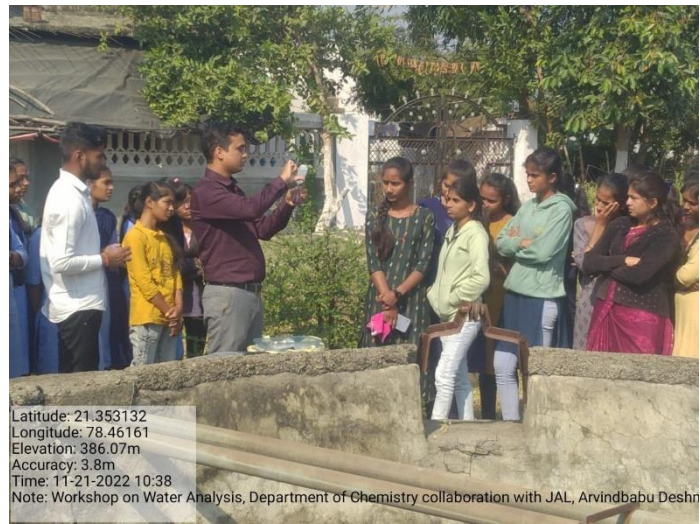


Figure 3- Demonstration of Advanced On Field Water Testing Kit by Dr. Sarang Dhotе @ Arvindbabu Deshmukh College, Bharsingi Dist. Nagpur, [M.S.], India on 21/11/2022.



Figure 4- Hand Over Advanced Water Testing Kit to Dr. N. Patankar Chairman of Envinzoa, Nagpur.