

**Extension and Outreach activity
By Dept. of Chemical Sciences,
Tezpur University**

Supporting Document 2020



A healing touch to dilapidated centuries old Vishnavite wood carvings in traditional way at Boralimora Satra, Tezpur



A healing touch to dilapidated centuries old Vishnavite wood carvings in traditional way at Batadrava Than, Nagaon



Workshop on Role of Colleges in Mitigation of Arsenic and Fluoride Problem in Assam: An UNICEF initiative, 24 February 2020



UNICEF Country Representative Dr Yasmin Ali Ahmed and UNICEF Assam Chief of Field Dr. Tushar Rane learning about Arsiron Nilogon and Fluoride Nilogon at Prof. Dutta's lab at Tezpur University



**DEPARTMENT OF CHEMICAL SCIENCES
TEZPUR UNIVERSITY, Tezpur 784 028**

NOTICE

Date: 25/02/2020

It is for information that Scientists from CSIR-Central Salt and Marine Chemicals Research Institute (CSMCRI), Bhavnagar, Gujarat are visiting Tezpur University on 26th February, 2020. They would like to interact with the students from different disciplines to let them know about the activities of CSMCRI to encourage them to join CSIR or CSMCRI at various capacities.

Final semester Master's students and PhD students are notified to attend the program. Interested faculty members may also attend the same.

Pankaj Bharali
Coordinator

**Venue: Dr. Radhikaram Dhekial Phookan Seminar Hall, Department of
Chemical Sciences**
Date: 26/02/2020 (Wednesday)
Time: 3.30 pm



**Members of Task Force of JJM visited TU to meet the PI to learn about Arsiron
Nilogon and Fluoride Nilogon, Mar 2020**



Food Items are distributed during Covid -19 pandemic situation

एक रुपये में 100 लीटर पानी होगा आर्सेनिक मुक्त

हिन्दुस्तान

एक्सक्लूसिव

पटना | संजय पांडेय

राज्य के ग्रामीण इलाके में जल्द ही आरओ से भी शुद्ध, पोषक तत्वों से भरपूर सस्ता पानी पीने को मिलेगा। यह पानी आर्सेनिक और लोहा से पूरी तरह मुक्त होगा। आर्सेनिक प्रभावित इलाके में यह पानी एक रुपये में 100 लीटर मिलेगा।

यह संभव होगा असम के तेजपुर विश्वविद्यालय के रसायन शास्त्र के प्रो. रॉबिन कुमार दत्ता के आर्सेनिक निलोमन तकनीक से। प्रो. रॉबिन की

इस तकनीक का परीक्षण राज्य के बक्सर जिले के सर्वाधिक आर्सेनिक प्रभावित ब्लॉक सिमरी और ब्रह्मपुर में हो चुका है। परीक्षण के दौरान एनआईटी पटना के विशेषज्ञ प्रो. सुब्रतो दास, स्वस्थ भारत प्रेरक मर्यक जोशी, प्रो. दत्ता के सहयोगी सुजाय चक्रवर्ती आदि मौजूद थे। बक्सर के डीएम राघवेंद्र सिंह की पहल पर पोषण अभियान के तहत प्रो. दत्ता की तकनीक का प्रदर्शन किया गया।

इसमें भोजपुर लोगों को पानी से आर्सेनिक और आयरन निकालने के लिए आर्सेनिक निलोमन तकनीक की जानकारी दी गई। घरों में इस्तेमाल होनेवाले खाने का सोडा, पौष्टिक परमैनेट और फेरिक क्लोराइड जैसे सस्ते रसायन का प्रयोग कर पानी को



आर्सेनिक मुक्त किया जा सकता है। राष्ट्रीय पोषण मिशन के मर्यक जोशी ने बताया कि बक्सर के अलावा आर्सेनिक प्रभावित अन्य जिलों के गांवों में भी इस विधि का प्रयोग होगा।

मिलेगा शुद्ध पानी

- तेजपुर विश्वविद्यालय के प्रो. रॉबिन दत्ता के आर्सेनिक निलोमन तकनीक से मिलेगा शुद्ध पानी
- कैसर के कारक आर्सेनिक वाले पानी से राज्य के ग्रामीणों को मिलेगी मुक्ति

आर्सेनिक निलोमन तकनीक से साफ होता पानी।

10 - 10 युनिट तैयार की है जीविकाकर्मियों ने

बक्सर के प्रभावित गांवों में लगेगी यूनिट : डीएम

बक्सर डीएम राघवेंद्र सिंह ने बताया कि शुद्ध पानी उपलब्ध कराने के लिए स्वास्थ्य मंत्रालय से 26 लाख जिले को दिया था। आर्सेनिक मुक्त पानी पर इन्वेंटिव आइडिया के लिए जिले को यह पुरस्कार की राशि मिली थी। इस राशि से टाटा शुद्ध जैसे उपकरण खरीद कर कुछ प्रभावित गांवों में बांटे जा सकते थे, लेकिन कुछ नया करने के उद्देश्य से प्रो. रॉबिन दत्ता से संपर्क किया गया। इनकी तकनीक काफी सस्ती और आर्सेनिक को निकालने में प्रभावी है। तीन अक्टूबर को सिमरी और ब्रह्मपुर ब्लॉक में तकनीक का प्रदर्शन किया गया। एनआईटी के प्रोफेसर प्रो. सुब्रतो दास की मदद से जीविकाकर्मियों ने पानी साफ करने की 10-10 युनिट तैयार की है। इसे आर्सेनिक प्रभावी गांवों में आंगनबाड़ी केंद्रों पर और सामुदायिक भवनों में लगाया जाएगा। इसके रखरखाव के लिए हर आंगनबाड़ी केंद्रों पर मास्टर ट्रेनर भी रखे जाएंगे।

क्या है आर्सेनिक निलोमन: आर्सेनिक निलोमन पानी से आर्सेनिक व आयरन (लोहा) निकालने का सबसे सस्ता और प्रभावी तकनीक है। इसे प्रो. रॉबिन कुमार दत्ता ने विकसित किया है। इसके

लिए उन्हें भारत सरकार से पेटेंट मिल चुका है। यह 1000 पीपीबी जैसे उच्च आर्सेनिक वाले पानी को शुद्ध करके आर्सेनिक की मात्रा 2 पीपीबी से भी कम कर देता है। सस्ती होने के कारण

इस तकनीक से ग्रामीण इलाके के गरीब से गरीब व्यक्ति को भी शुद्ध पानी पीने को मिल सकेगा। श्रीश्री रविशंकर समेत कई राष्ट्रीय-अंतरराष्ट्रीय संस्थाएं उनकी सराहना कर चुकी हैं।

Arsiron Nilogon is reaching out to lakhs of arsenic affected people in Assam and other states like Bihar, UP and WB(<https://www.livehindustan.com/bihar/story-100-liters-arsenic-free-water-for-1-rupees-in-bihar-2815369.html>)

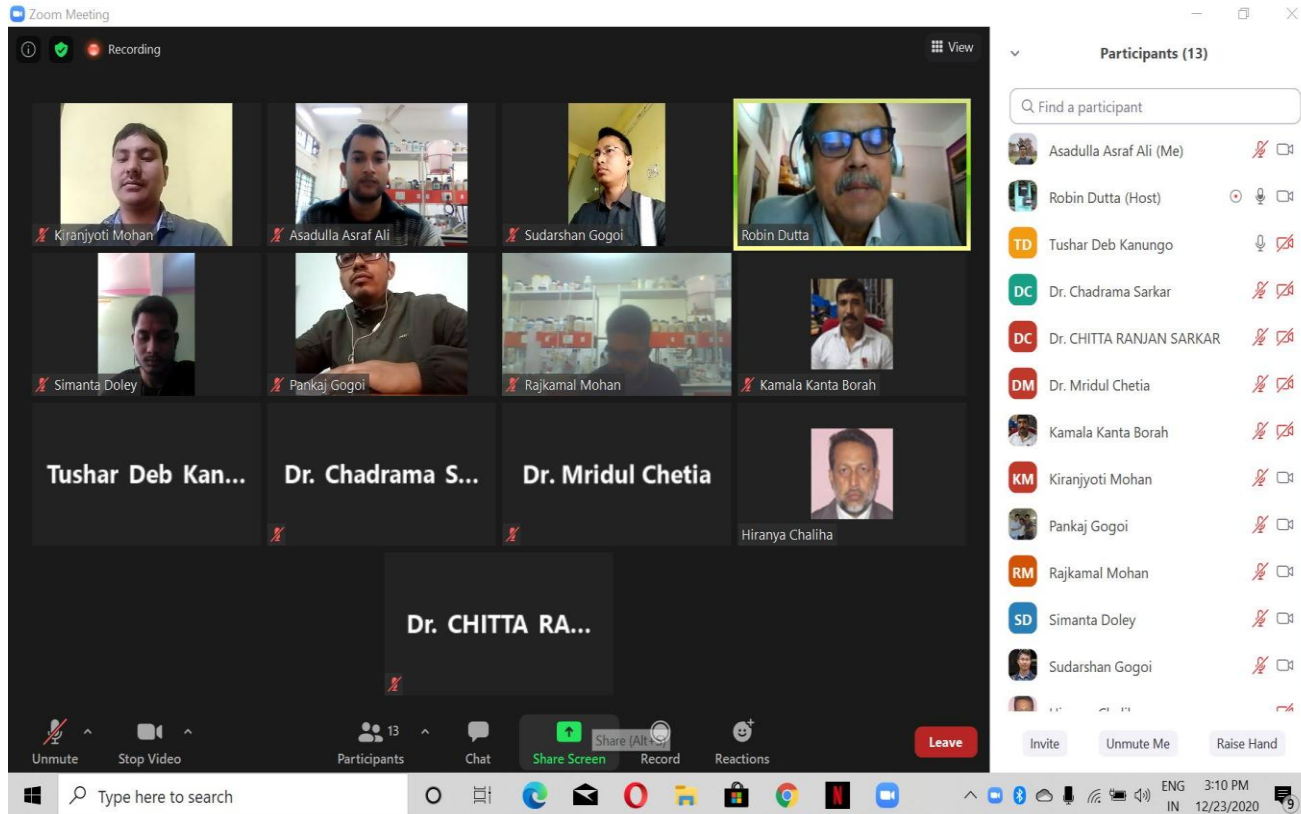
The image is a screenshot of a Zoom meeting. The main content is a presentation slide with a light orange background. The slide text reads: "Online meeting on Arsenic Contamination and Arsiron Nilogon for Golaghat District of Assam" in brown and red fonts. Below this, it says "11:00 am, 17 October 2020" and "Organized by Department of Chemical Sciences, Tezpur University" in blue. At the bottom of the slide, it says "(Participants: Volunteers, users, villagers, NGOs, teachers of schools & colleges, Officials of Education Depart".

At the top of the Zoom window, there is a green bar that says "You are viewing Robin Dutta's screen" and a "View Options" dropdown. In the top right corner, there is a "View" button. On the right side, there is a vertical list of participant names: "Subrat Borah" and "Arfin".

At the bottom of the Zoom window, there is a toolbar with icons for "Mute", "Start Video", "Security", "Participants" (showing 35), "Chat", "Share Screen", "Record", "Reactions", and "End".

Overlaid on the bottom right of the slide is a "Participants (35)" window. It has a search bar "Find a participant" and a list of participants: "Asadulla Asraf (Host, me)", "Robin Dutta" (with a green plus sign), "realme C2", "Shymanta Gogoi", and "Arfin". At the bottom of this window are "Invite" and "Mute All" buttons.

Online meeting on Arsenic Contamination and Arsiron Nilogon for Golaghat District of Assam



Minutes of the Online meeting on “Water Quality Testing at college sciences laboratories in Assam

Workshop on **Hengul-Haital Painting Tradition of Early Assam**

Introduction: This workshop is an out-reach activity to help the society in a much-needed restoration of worn out valuable traditional woodcarvings and reviving a dying art form, namely, painting of woodcarvings with Hengul-Haital and other traditional pigments of early and medieval Assam. This is the third of a series of workshop started with support of Tezpur University in 2018 at Batadrava Satra as the venue, held again in 2019 at Boralimora Satra, Tezpur and this time at Boralimora Satra and Tezpur University.

Duration: From 16th to 21st February 2020.

Venues: Boralimora Satra as the venue for day 1-5 for a hands-on training workshop and Tezpur University as the venue for a grand closing function on day six.

Last date of application: 6 February 2020.

The Background of the present workshop: A research group of the convener of the workshop from the Department of Chemical Sciences had initiated restoration of some worn out and partially damaged valuable woodcarvings existing at Boralimora Satra, a small Vaisnavite institution near Tezpur town under a project sponsored by Indian Science Academy, New Delhi in 2018. The Department of Chemical Sciences also organized a small workshop to facilitate the work as a part of its extension activity in February 2019 under UGC-SAP program of the Department.

The restoration work is going on in an irregular manner till now. It is planned to complete the restoration, in the form of a 6-Day workshop from 16 to 21 February 2020 along with hands on training of some participants, interested to learn the traditional art form, by some experts in the art form.

Activities in the workshop: Painting of and training of participants by experts in the art during first 5 days at Baralimora Satra. The experts will be drawn from Majuli and Nagaon. Closing Ceremony on the 6th day at Tezpur University where the experts, the participants of the workshop and other people associated with and interested in the art form will be invited with an aim of promoting the dying art form and initiating restoration of similar worn out woodcarvings existing in various Satras, Namghars and other places in Assam. We propose a gathering of 100 people in the Closing Ceremony.

Participants: Anyone involved in restoration of woodcarvings or interested in the traditional art form of Hengul-Haital may apply for participation briefly mentioning why he/she is interested along with complete biodata by 6 Feb 2020 through email to. The selected participants will be provided workshop kit, working lunch and refreshment during the workshop days. They have to arrange for travel and accommodation at Tezpur themselves.

Organizing Committee:

Patron: Prof. Vinod Kumar Jain, Vice-chancellor, Tezpur University

Chairman: Prof. Ruli Bora, Head, Department of Chemical Sciences, Tezpur University

Members: All faculty members of the Department of Chemical Sciences, Tezpur University
Shri Sobhan Mahanta, Deka Satradhikar, Boralimora Satra, Tezpur
Shri Hamanta Kumar Lahkar, Entrepreneur, Tezpur

Secretary: Dr. Sanjeev Pran Mahanta, Dept. of Chem. Sciences, Tezpur University

Joint Convener: Dr. Kusum Kumar Bania, Dept. of Chem. Sciences, Tezpur University

Convener: Prof. Robin Kumar Dutta, Dept. of Chem. Sciences, Tezpur University

Contact detail: Email: robind@tezu.ernet.in (Prof. Robin Kumar Dutta), WhatsApp/Phone: 8135809715 (Asadulla Asraf Ali) and 8638863789 (Shamiran Baroi).

Agenda

Platform – Zoom Meetings, Zoom

11:00 am	Welcome Address – by <u>Dr. Robin Kumar Dutta</u> , <i>Professor, Dept of Chemical Sciences, Tezpur University</i>
11:30 am	Presentation on Theory and Methods of Testing of Water Quality Parameters – Mr. <u>Rajkamal Mohan</u> , <i>Program Coordinator, UNICEF-sponsored Project</i> – Mr. <u>Rituparna Saikia</u> , <i>Research Associate, UNICEF-sponsored Project, Dept. of Chem. Scs, TU</i>
12:00 am	Present laboratory status including chemicals and interaction with the laboratory personnel to know the problems faced by <u>them</u> <ul style="list-style-type: none">- <u>Rino Kr. Brahma</u>, laboratory Permanent Staff, DLL Kokrajhar,- <u>Sanjay Saha</u>, Assistant Chemist, SDLL <u>Dotoma</u>,- <u>Holodhar Basumatary</u>, Assistant Chemist, SDLL <u>Gosaigaon</u>,- <u>Jhunu Brahma</u>, laboratory Assistant, SDLL <u>Gosaigaon</u>, (Doubt clearance and difficulties faced during water testing in respective laboratories)
12:45 pm	Presentation on Arsiron Nilogon By <i>Asadulla Asraf Ali, Research Associate, UNICEF-sponsored Project</i> <i>Krishna Kamal Hazarika, DST Project Fellow</i>

Training on Water Quality Testing *For laboratory personnel of PHED Kokrajhar District An Initiative of UNICEF Assam*
Tezpur University: 28 October 2020 (Zoom meeting)

Agenda

(Tentative)

Platform – Zoom Meetings, Zoom

11:00 am	Welcome Address – by <u>Dr. Robin Kumar Dutta</u> , <i>Professor, Dept of Chemical Sciences, Tezpur University</i>
11:30 am	Presentation on Theory and Methods of Testing of Water Quality Parameters – Mr. <u>Rajkamal Mohan</u> , <i>Program Coordinator, UNICEF-sponsored Project</i> – Mr. <u>Rituparna Saikia</u> , <i>Research Associate, UNICEF-sponsored Project,</i> <i>Dept. of Chem. Scs, TU</i>
12:00 am	Present laboratory status including chemicals and interaction with the laboratory personnel to know the problems faced by <u>them</u> - <u>Bhanumati Govari</u> , Assistant Chemist, DLL <u>Mushalpur</u> , - <u>Urmila Swargiary</u> , laboratory Assistant, DLL <u>Mushalpur</u> , - <u>Dipti Dahal</u> , Assistant Chemist, SDLL <u>Tamulpur</u> , - <u>Monika Bodo</u> , laboratory Assistant, SDLL <u>Tamulpur</u> , (Doubt clearance and difficulties faced during water testing in respective laboratories)
12:45 pm	Presentation on Arsiron Nilogon By <i>Asadulla Asraf Ali, Research Associate, UNICEF-sponsored Project</i> <i>Krishna Kamal Hazarika, DST Project Fellow</i>

**Training on Water Quality Testing For laboratory
personnel of PHED Baksa District An Initiative of
UNICEF Assam Tezpur University: 2 November 2020
(Zoom meeting)**

Agenda

Platform – Zoom Meetings, Zoom



11:30 am	Welcome Address – by <u>Dr. Robin Kumar Dutta</u> , <i>Professor, Dept of Chemical Sciences, Tezpur University</i>
12:00 pm	Presentation on Theory and Methods of Testing of Water Quality Parameters – Mr. <u>Rajkamal Mohan</u> , <i>Program Coordinator, UNICEF- Project</i> – Mr. <u>Rituparna Saikia</u> , <i>Research Associate, UNICEF-sponsored Project, Dept. of Chem. Scs, TU</i>
12:45 pm	Present laboratory status including chemicals and interaction with the laboratory personnel to know the problems faced by <u>them</u> <ul style="list-style-type: none">- <u>Indrajit Das</u>, laboratory Assistant, DLL <u>Barpeta</u>,- <u>Dipankar Das</u>, Assistant Chemist, Mobile Van, DLL <u>Barpeta</u>,- <u>Khanjan Jyoti Baishya</u>, laboratory Assistant, Mobile Van, DLL <u>Barpeta</u>,- <u>Deepjyoti Bayan</u>, Assistant Chemist, SDLL <u>Pathsala</u>,- <u>Hrishikesh Talukdar</u>, laboratory Assistant, SDLL <u>Pathsala</u>,- <u>Raj Sarma</u>, laboratory Assistant, DLL <u>Bongaigaon</u>,- <u>Dhiren Das</u>, laboratory Assistant, DLL <u>Bongaigaon</u> (Doubt clearance and difficulties faced during water testing in respective laboratories)
1:30 pm	Presentation on Arsiron Nilogon By <i>Asadulla Asraf Ali, Research Associate, UNICEF Project</i> <i>Krishna Kamal Hazarika, JRF, DST Project Fellow</i>

Training on Water Quality Testing For laboratory personnel of PHED Borpeta and Bongaigaon District An Initiative of UNICEF Assam Tezpur University: 12 November 2020 (Zoom meeting)

Agenda

(Tentative)

Platform – Zoom Meetings, Zoom

11:00 am	Welcome Address – by <u>Dr. Robin Kumar Dutta</u> , <i>Professor, Dept of Chemical Sciences, Tezpur University</i>
11:30 am	Presentation on Theory and Methods of Testing of Water Quality Parameters – Mr. <u>Rajkamal Mohan</u> , <i>Program Coordinator, UNICEF Project</i> – Mr. <u>Rituparna Saikia</u> , <i>Research Associate, UNICEF Project,</i> <i>Dept. of Chem. Scs, TU</i>
12:15 pm	Present laboratory status including chemicals and interaction with the laboratory personnel to know the problems faced by <u>them</u> - <u>Jenifer Alam</u> , Assistant Chemist, DLL Dhubri, - <u>Naba Kalita</u> , Assistant Chemist, SDLL <u>Bilasipara</u> - <u>Prantosh Sharma</u> , laboratory Assistant, SDLL <u>Bilasipara</u> - <u>Sukleshwar Basumatary</u> , Assistant Chemist, DLL <u>Basugaon</u> - <u>Shantanu Das</u> , laboratory Assistant, DLL <u>Basugaon</u> - <u>Dwimu Basumatary</u> , Assistant Chemist, SDLL <u>Bijni</u> - <u>Sumita Bodo</u> , laboratory Assistant, SDLL <u>Bijni</u> (Doubt clearance and difficulties faced during water testing in respective laboratories)
12:15 pm	Presentation on Arsiron Nilogon By <i>Asadulla Asraf Ali, Research Associate, UNICEF Project</i>

Training on Water Quality Testing For laboratory personnel of PHED Dhubri and Chirang District An Initiative of UNICEF Assam Tezpur University: 17 November 2020 (Zoom meeting)

	Common Agenda
3:00 pm	Welcome Address – <u>Dr. Robin Kumar Dutta</u> , <i>Professor, Dept of Chemical Sciences, Tezpur University</i>
3:15 pm	Importance and necessity of setting up a parallel Water Quality Testing network in Assam – <u>Dr. Robin Kumar Dutta</u> , <i>Professor, Dept of Chemical Sciences, Tezpur University</i>
4:00 pm	Discussion with the coordinators of colleges and universities regarding modalities for setting up of Water Quality Testing Centres in their Science Laboratories
4:45 pm	Presentation on spectroscopic determination of Arsenic and Fluoride in water using UV-Vis spectrophotometer – <u>Mr. Rajkamal Mohan</u> , <i>Program Coordinator, UNICEF-sponsored Project</i>
5:15 pm	Vote of thanks – <u>Dr. Robin Kumar Dutta</u> , <i>Professor, Dept of Chemical Sciences, Tezpur University</i>

**Online Meeting with coordinators of colleges and universities
for Discussion on modalities for setting up of Water Quality
Testing Centres in Science Laboratories *An Initiative of
UNICEF Assam***
**Tezpur University: 12, 23 and 30 December 2020 (Zoom
platform)**