



ADD ON COURSE: CERTIFICATE COURSE IN WATER AND SOIL TESTING

DEPARTMENT OF CHEMISTRY

L.T.K. COLLEGE, Azad, Lakhimpur, 787032, Assam

1. Aims and Objectives:

- To develop basic understanding regarding soil testing in the students.
- To introduce them with macro and micro nutrients for soil.
- To enhance their skills about water analysis.

2. Syllabus:

Syllabus: - Certificate course in Soil and Water Testing.

Theory:

Unit I- Introduction to Water testing, Physico- chemical parameters: Colour, odour, P^H, turbidity, total dissolved solids, Types of Water: hard and soft water, Water pollutants, role of water testing for environment, Uses of water analysis.

Recommended Books:

- Hand book of water and waste water analysis, Kanwaljit Kaur
- Experimental methods for water analysis, Dr.G.S. WAGH, Nirali prakahan
- An introduction to water sampling and testing of water systems. J.paul Guyer, P.E, R.A

Unit II- Introduction of Soil, properties of soil, fertility status of soils, soil profile, and classification, Soil taxonomy, conservation and management,, role of soil testing for environment, Uses of soil analysis.

Recommended Books:

- Soil and soil fertility, Troch, F.R. And Thompson, L.M.Oxford press.
- Handbook of agriculture sciences, S.S.Singh, P.Gupta, A.K.Gupta, Kalyani publication.
- Introduction to soil laboratory manual, J.J.Harsett stipes.



Mishen Kalish
28.07.22

Practical:

Part I – Water Analysis

- 1) Determination of hardness of water.
- 2) Determination of P^H of given water sample.
- 3) Determination of alkalinity of water.
- 4) Determination of TDS of given sample of water.
- 5) Determination of dissolved oxygen test (DO)
- 6) Determination of electrical conductivity.
- 7) Determination of Phosphate.
- 8) Determination of temperature.

Part II – Soil Analysis

- 1) Visit to farmers fields for collection of soil samples, identification of nutrient deficiency symptoms in crop.
- 2) Determination of P^H of given soil sample.
- 3) Determination of nutrient content (NPK) of soil.
- 4) Determination of salinity of given soil sample.
- 5) Determination of micro-nutrient content of soil sample.

3. Class Routine:

Days	Time
Monday	2.00 pm – 3.00 pm
Wednesday	2.00 pm – 3.00 pm
Friday	2.00 pm – 3.00 pm



Biren Kulkarni
Chem Dept

4. Photo:



Biren Kaboty

5. Student List:

Student Enrolment List and Students Who Completed the Course

Sl. No	Name of student
1	Asharani Nath
2	Devaprotim dutta
3	Partha pratim boruah
4	Himanka hazarika
5	Zakaria alom
6	Biren doley
7	Khagen borah
8	Bikrom gohain
9	Rahul borah
10	Narendra das
11	Shraaban kr. nath
12	Bhargab hazarika
13	Dhurbajyoti doley
14	Krishna moni borah
15	Subhrama bhakh jyoti nath
16	Bokul kalita
17	Devajit pegu
18	Indro jyoti borah
19	Khagendra ba magor
20	Krishna borah
21	Smiriti nath
22	Nijara pegu
23	Nihar ranjan kalita
24	Rajani kanta doley
25	Uday jyoti dula kahoria
26	Barnali miri
27	Priyanka doley
28	Janmantor dowarah
29	Pawan hemrom
30	Bitu doley
31	Pranjal pegu
32	Raj regon
33	Pavan chetry
34	Rantu saikia



Biren Koley

20. What are the objectives of drianage ?

7. Certificate:

LAKHIMPUR TELAHI KAMALABARIA COLLEGE



লক্ষীমপুৰ তেলাহী কমলাবৰীয়া মহাবিদ্যালয়

P.O. AZAD, NORTH LAKHIMPUR
ESTD : 1977

SI. No. LTKC/CWST/01

Date: 28/06/22

CERTIFICATE

This is to certify that

Himankar Hazarika

has completed the

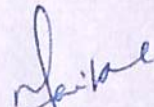
Add on course Water and Soil Testing

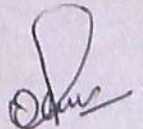
conducted by the Deptt. of Chemistry

and

approved by

Dibrugarh University, Dibrugarh
from this College.


(Dr. B.K. Saikia)
Principal


Course Coordinator

L.T.K. College, Azad, North Lakhimpur
North Lakhimpur

Head
Department of Chemistry
L.T.K. College, Azad,
Lakhimpur, Assam



Biren Kalchauer

8. **Learning Outcome:** After the completion of the course students develop their skills related to soil testing. They develop their understanding of the macro and micronutrients of soil and become more efficient in soil testing.

*Biren Kakoti
Chem. Dept.*



Yake

*Principal
L.T.K. College Azad
North Lakhimpur*

(Dr. Debajit Dutta)

Course Co-ordinator

Add on Course

Department of Chemistry

L.T.K. College, Azad, North Lakhimpur