



National Webinar on Elemental analysis by CHNS/O Analyzer

Friday, 08/10/2021 ; Time: 10.00am to 12.30 p.m.

SICART

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Organized by

**Sophisticated Instrumentation Centre
for Applied Research and Testing
(SICART)**

A

Charutar Vidya Mandal Institution

Supported by

**Department of Science and Technology (DST)
Ministry of Science and Technology,
Government of India**

Under

**Sophisticated Analytical Instrument Facilities
(SAIF) Programme**

About webinar:

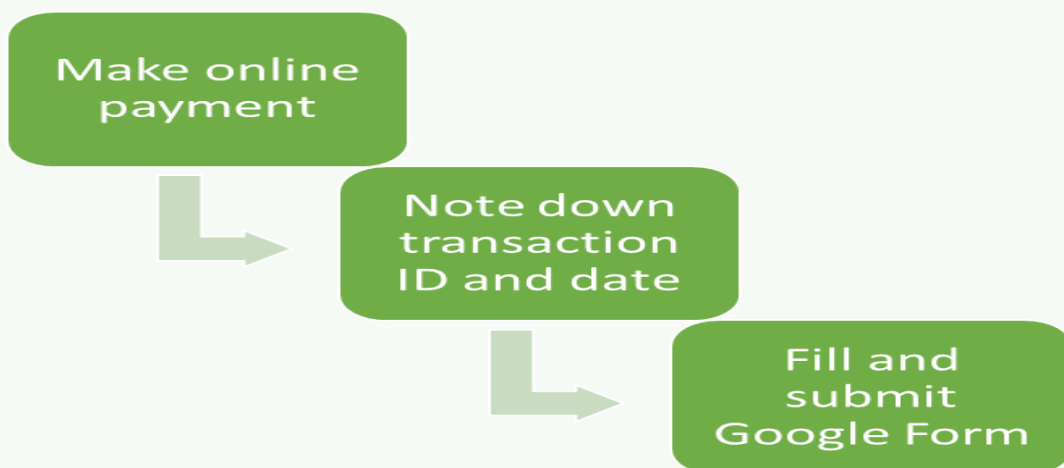
CHNS/O elemental analysis is also known as organic elemental analysis or elemental microanalysis. It determines the amount of Carbon (C), Hydrogen (H), Nitrogen (N), Sulfur (S) and Oxygen (O) present in a sample. Its determination is based on combustion of the sample and subsequent analysis of the gases produced due to combustion. Results of CHNS/O analysis in conjunction with mass spectroscopy and NMR data can be used to characterize a compound. The method is used for analysis of pure organic compounds as well as for industrial and agricultural raw materials and intermediates and final products.

This webinar is a step towards understanding the principle and applications of the technique. The major emphasis is to demonstrate working of CHNS/O analyzer.

Who should attend?

- Scientists/ Technical persons from Industries/ R & D organization involved in characterization of chemical compounds/ industrial raw materials/finished products/ chemical intermediates.
- Students in final year of Science/ Engineering/ Pharmacy program (Bachelor/ Post graduate).
- Research Scholars perusing PhD program in Science/ Engineering/ Pharmacy Institutions.
- Faculty members of Science/ Engineering/ Pharmacy Institutions

Procedure for Registration



Registration fees:

Rs. 100/- (Inclusive of GST)

Last date for registration: 30/09/2021

Mode of payment:**Bank Details for E-Payment Purpose**

Name of the Bank	HDFC Bank Ltd
Bank Account Number	50200061588363
Account Name	SICART
RTGS(IFSC) CODE NUMBER/ NEFT Number	HDFC0009500

Registration:

For registration, [Click here](#)

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Er. Shri Bhikhubhai B. Patel Chairman, Charutar Vidya Mandal

Patron
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Charutar Vidya Mandal (CVM)

The iron man of India- Late shri **Sardar Vallabhbhai Patel** along with two stalwarts late shri **Bhaikaka** and late shri **Bhikhabhai** decided in the year 1945 to work for regeneration of villages through education. They established education township that is known as Vallabh Vidyanagar. The founders established Charutar Vidya Mandal which is an education trust registered on August 10, 1945. CVM established first college- Vithalbhai Patel Mahavidhyalaya in June 1947. The engineering college Birla Vishwakarma Mahavidhyalaya was established in 1948. It was first engineering college established by a private trust in the entire Bombay state, which extended from Karachi to Dharwad and the first one in Gujarat state. The commerce college Bhikhabhai Jivabhai Vanijya Mahavidyalaya was established in 1950.

Former ICS officer of great repute- late **Shri H. M. Patel** nurtured Charutar Vidya Mandal for 35 years as the Chairman and as Bhaikaka's successor. Late Shri H. M. Patel served the country as Cabinet Secretary, Partition Secretary, Defence Secretary, Food and Agriculture Secretary, Principal Finance Secretary, Finance Minister and Home Minister of India. At Vallabh Vidyanagar, many higher education institutions were built and nurtured under his dynamic leadership.

Late Shri C.L. Patel succeeded Shri H. M. Patel as the Chairman of CVM. Shri Bhaikaka and Shri Bhikhabhai created Vallabh Vidyanagar, Shri H. M. Patel created Vitthal Udyognagar and Arogyanagar. Shri C. L. Patel was the creator of New Vallabh Vidyanagar. He was instrumental in establishing and nurturing many self-finance institutions.

Er. Shri Bhikhubhai Patel succeeded Shri C. L. Patel as the **Chairman of Charutar Vidya Mandal**. He is currently leading CVM and under his visionary leadership CVM has established **CVM University**. Under the umbrella of CVM and CVM University, 51 educational institutes are providing services that range from primary education to doctoral (Ph.D.) level studies. Vallabh Vidyanagar has emerged as center for quality education and research in diverse disciplines.

About SICART

SICART was Inaugurated on Friday 15th December, 2000 by Dr. V. S. Ramamurthy, Secretary, Department of Science & Technology -GOI and Pramukh Swami Maharaj. It is about 10,000 square meters of state-of-the-art facility including equipment rooms, laboratories, office space, Computer rooms, meeting room, and supporting infrastructure, etc. Institute is managed 75 years old Charutar Vidya Mandal (CVM)- a largest education trust located at Vallabh Vidyanagar, Gujarat.

- SICART is supported by Department of Science and Technology (DST), Government of India under Sophisticated Analytical Instrumentation Facility (SAIF) program.
- It is recognized as a Research Centre by the Department of Scientific & Industrial Research (DSIR) GOI, New Delhi
- It is also recognized as Environmental Auditor (Schedule-I) by Gujarat Pollution Control Board (GPCB).
- It is recognized by Charutar Vidya Mandal University for Ph. D. program.
- This facility is accredited by NABL (National Accreditation Board for Testing and Calibration Laboratories) as per following details: (Certificate No. TC- 5124)

Sr. No.	Group of products, materials or items tested	Specific tests or types of tests performed
1	Drugs & Pharmaceuticals (Active pharmaceutical ingredients) 1) Paracetamol 2) Chlorthalidone 3) Atorvastatin Ca 4) Diclofenac Na	Molecular mass determination using Mass Spectrometer (LC-MS-MS)
2	Drugs & Pharmaceuticals (Active Pharma. ingredients) 1) Paracetamol 2) Chlorthalidone 3) Atorvastatin Ca 4) Diclofenac Na	Structure identification (Proton & Carbon determination) Using FT-NMR
3	Water (Potable water)	Fluoride, Sulphate as SO ₄ By using HACH DR 3900

Instrumentation facility at SICART



CHNS/O Analyzer,
Model: Unicube,
Make: Elementar



UV-VIS-NIR Spectrometer,,
•**Model: Lambda 1050+**
•**Make: Perkin Elmer**



FEG – Transmission Electron Microscope (HR-TEM)
•**Model: Talos F200i S/TEM (HRTEM-200KV),**
•**Make: Thermo Fisher**



Inductively Coupled Plasma Spectrometer (ICP - OES)
•**Model: Avio 200**
•**Make: Perkin Elmer**



Thermo Gravimetric Analyzer
•**Model: TGA-4000**
•**Make: Perkin Elmer**



X-Ray Diffractometer (XRD)
•**Model: D8 Advance**
•**Make: Bruker**



Thermal Analysis System
•**Model: DSC 8000**
•**Make: Perkin Elmer**



Simultaneous Thermal Analyzer,
Model: STA-8000
Make: Perkin Elmer



Field Emission Gun :Scanning Electron Microscope (FEG-SEM) with EDAX,
Model: Nova NanoSEM 450,
Make: FEI Ltd



Wavelength-Dispersive X-ray Fluorescence Spectrometry (WD-XRF)
Model: AxiosMAX
Make: PANalytical



400 MHz FT – NMR Spectrometer
•**Model: 400MHz FT NMR,**
•**Avance III, Make : Bruker**



Liquid Chromatography-with Mass Spectrometry
Model: LCQ Fleet and TSQ Quantum,
Make: Thermo Scientific

Instrumentation facility at SICART



Gel Permeation Chromatograph (GPC)

**Model: Turbo matrix – 40,
Make: Perkin Elmer**



Gas Chromatograph with Mass Spectrometry (GC-MS)

- Model: Autosystem XL GC with Turbomass,
- Make: Perkin Elmer



Gas Chromatograph with Head Space (GC-HS)

- Model: Turbo matrix – 40
- Make: Perkin Elmer



Ambient Air Monitoring Mobile Van,

Make: Environmental SA



Total Organic Carbon Analyzer,

**Model: TOC-VCSN / TNM-1
Make: Shimadzu Corporation, Japan**



Particle Size Analyzer

**Model: Helos-BF
Make: SYMPATEC, Germany**



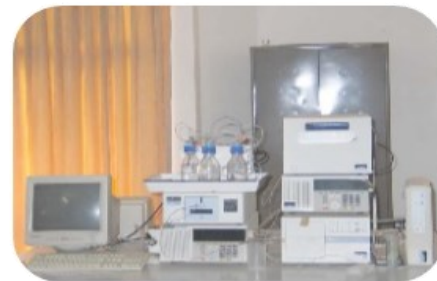
Universal Testing Machine

**Model: Autograph AG100KNG,
Make: Shimadzu, Japan**



Transmission Electron Microscope (TEM)

**Model: Tecnai 20
Make: Philips, Holland**



High Performance Liquid Chromatography (HPLC)

- Model: Series 200,
- Make: Perkin Elmer



Gas Chromatography (GC)

- Model: Auto System XL
- Make: Perkin Elmer



High Performance Thin Layer Chromatography (HPTLC)

Make: Camag



Fourier Transform Infrared Spectrometer (FTIR)

- Model: Spectrum GX
- Make: Perkin Elmer, U.S.A.



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Sponsored by **Department of Science and Technology, Govt. of India, New Delhi**

Sardar Patel Centre for Science and Technology

Behind V.P. & R.P.T.P. Science College

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