Rayat Shikshan Sanstha's KARMAVEER BHAURAO PATIL COLLEGE, VASHI (Autonomous) Department of Microbiology

MoU Activity Report Date: 14th December 2019

Three days Workshop on Chromatography and Spectroscopy at the Institute of Chromatography and Spectroscopy, SIES, Nerul, Navi Mumbai

Details of Activity

Title of Activity: Three days Workshop on Chromatography and spectroscopy at the Institute of Chromatography and Spectroscopy, SIES, Nerul, Navi Mumbai

Duration: 9th, 10th & 11th December 2019 - Three Days (Total duration: 20 hours)

Attendee Number: 21 participants + 1 faculty member

Name of Resource person: Dr. Vishwanath Malkar and Mr. Vivek Parab

Name of Collaborating Agency: Institute of Chromatography and Spectroscopy, SIES,

Nerul, Navi Mumbai

Objectives of Activity

- To get hands-on training in advanced instruments.
- To observe the detailed operation of instruments.

Description of Activity

Three days Workshop on Chromatography and spectroscopy was carried out on 9th, 10th & 11th December 2019 (daily from 10:00 AM to 5:30 PM) at the Institute of Chromatography and Spectroscopy (ISC) at SIES College, Nerul, Navi Mumbai. This three days workshop/training program involved detailed working of Gas Chromatography-Mass Spectrometry (GC-MS), Ion Chromatography (IC), High-Pressure Liquid Chromatography (HPLC) and Fourier Transmission-Infrared Spectrometry (FT-IR).

Day 1: Dr. Vishwanath Malkar and Mr. Vivek Parab from ISC welcomed all the students and faculty Mr Sandesh Gharge. Dr. Vishwanath Malkar explained the detailed theory of all the above-mentioned instruments.

Day 2: The session started with a detailed practical knowledge of GC-MS. Mr Vivek explained the types of gases used in Gas chromatography and their significance along with the colour codes used to differentiate the containers. Trainer showed us the different types of Columns used in Gas chromatography namely DB1, DB5, DB27 etc. Mr. Vivek demonstrated the calibration process. He also explained the method development for the sample. Mr Vivek injected the pesticide sample into the sampler of GC-MS. The sample was run and the chromatogram was observed with the help of TURBOMASS software.

The second half session started with Mr Vivek demonstrating Ion chromatography. He explained in detail the Pump system of the equipment that helps to load the sample. The Loop valve injector or Rheo Dyne Injector was used to inject the sample. He showed the columns used in Ion chromatography namely RP-18, C-18 etc. The software used for this technique was MAGICNETS.

Day 3: The next session was on HPLC. Mr Vivek also mentioned that usually environmental samples like seawater are analyzed by HPLC. Additionally, the operation of FT-IR equipment was shown along with the troubleshooting of the peaks of the sample.

In the second half of the session, an exit quiz was conducted and a mark sheet was submitted to the faculty in charge, Mr Sandesh Gharge.

https://drive.google.com/file/d/1V9rbwvuPxVq5NAagYPz4lIjOCdLzBbVc/view?usp=drive_link

The three-day workshop ended with a vote of Thanks by Mr Sandesh Gharge. The training ended by 5:30 PM.

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Impact of activity on the community: NA

The benefit to participants:

- a) Participants got full basic and advanced knowledge about principles and handling of instruments.
- b) Troubleshooting of all instruments was discussed with Mr Vivek Parab
- c) Detailed operation of advanced instruments was taught.

Link of activity (If Online): NA

Certificates received by students (Google Drive link):

https://drive.google.com/file/d/1Rj05bpIISdby1RTxJ7fn4sRhDLryQi4Q/view?usp=sharing

Attendance of participated students (Google Drive link):

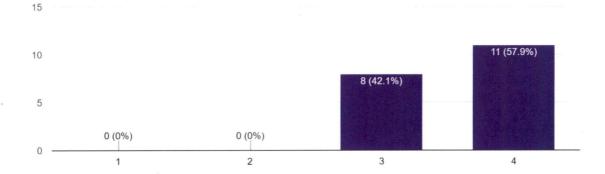
https://drive.google.com/file/d/1GJbt5ykVPQ4YR_rA1OKy06EJoAd_ZtJ6/view?usp=drive_link

Feedback of activity (Google Drive link):

 $\frac{https://docs.google.com/spreadsheets/d/1pntYoasfAm0gSwzdNGh1RpXepGMM2hl5S9Ri6lu}{P_4E/edit?usp=sharing}$

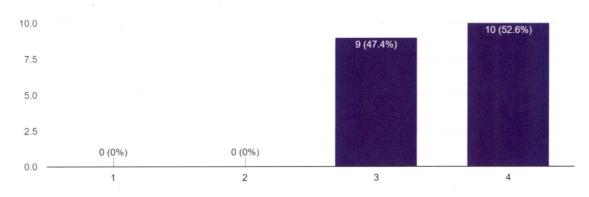
Relevance of Instruments included in the training program

19 responses



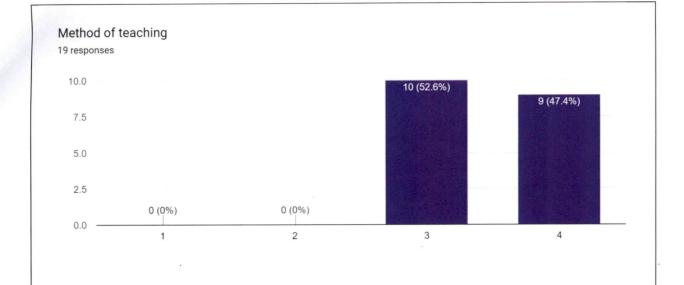
Explanation of theoretical background of instruments

19 responses



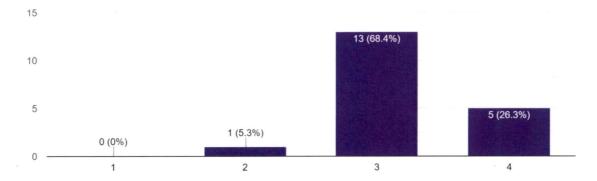


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Time duration allotted for lectures

19 responses



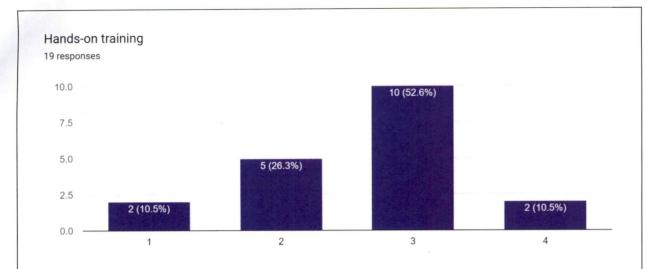
Time duration allotted for practical sessions

19 responses

15



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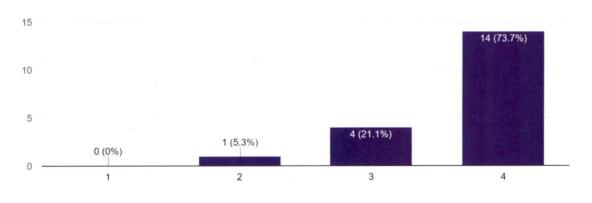
Interaction of instructor with students

19 responses

15
10
5
0 (0%) 0 (0%)
0 1 2 3 4

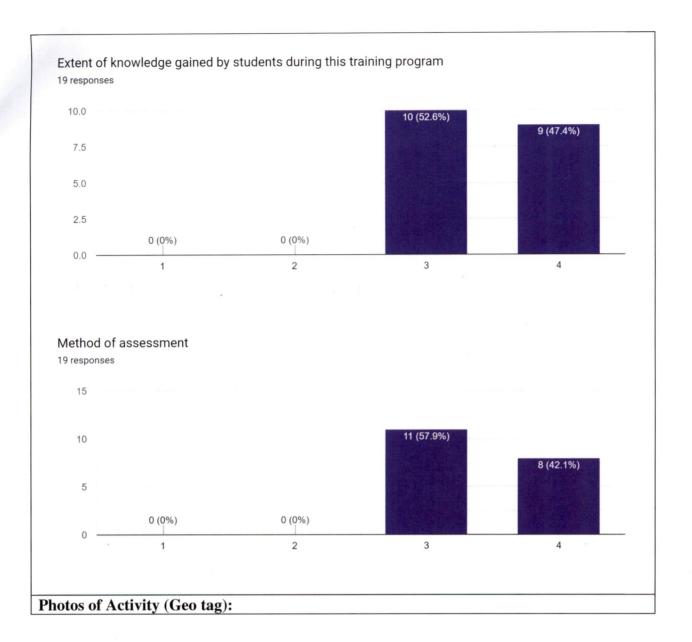
Approach and efforts of instructor towards doubt-solving.

19 responses





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Three Days Workshop on Chromatography and Spectroscopy (SIES-ICS)

Marksheet

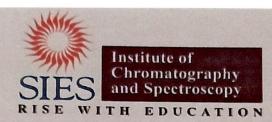
Sr.No	Roll.No	Name	Marks (Out of 40)
1	199141	Tanvi Ghodke	Absent
2	199142	Pradnya Mukadam	30
3	199143	Shruti More	34
4	199144	Sweety Tandel	. 24
5	199145	Parbonee Dey	20
6	199146	Ravikumar.S. Yadav	. 34
7	199147	Rahul Wadekar	30
8	199148	Shilpa Adhikari	24
9	199149	Krutika Khatate	34
10	199150	Mayur Atpadkar	30
11	199151	Vidhyesh Karanjavkar	28
12	199152	Shinu Yadav	. 30
13	199153	Priyanka Pandey	36
14	199154	Dhanashree Patil	22
15	199155	Pooja Vengurlekar	26
16	199156	Ajinkya Pawar	28
17	199157	Anit Maurya	16
18	199158	Jayashri Pawar	34
19	199159	Kajal Phadtare	28
20	199160	Sonia Bhekre	16
21	199161	Komal Chavan	20

ABMUMINAN CONTRACTOR AND CONTRACTOR

I/c. Principal
Karmaveer Bhaurao Patil College
Vashi, Navi Mumbai - 400 703

Evaluated by

-SIES-ICS



Certificate of Attendance

presented to

Mayur Atpadkar

for participating actively in the "Three days workshop on Chromatography and Spectroscopy" at SIES Institute of Chromatography and Spectroscopy

in Nerul on 9th, 10th and 11th December, 2019

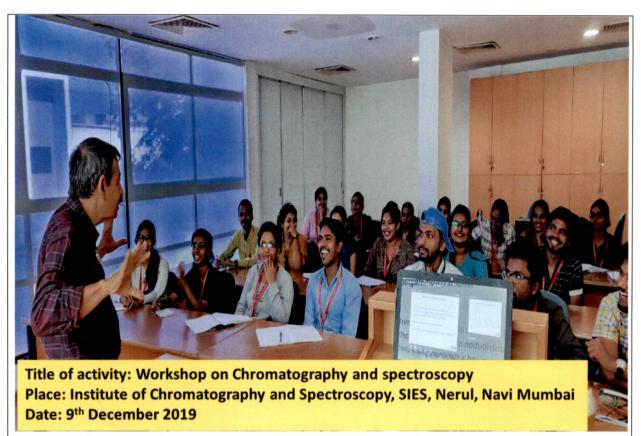
Call

Dr. Vishwanath Malkar, Honorary Director

SIES Institute of Chromatography and Spectroscopy Sri Chandrasekarendra Saraswathy Vidyapuram Nerul, Navi Mumbai- 400 706

I/c. Principal
Karmaveer Bhaurao Patil College





Dr. Vishwanath Malkar, Honorary Director, explaining the principles of all the instruments to the M.Sc. Part II students



Title of activity: Workshop on Chromatography and spectroscopy

Place: Institute of Chromatography and Spectroscopy, SIES, Nerul, Navi Mumbai

Date: 9th December 2019

Karmaveer Bhaurao Patil College Vashi, Navi Mumbai - 400 703.

Dr. Vishwanath Malkar, Mr. Vivek Parab and all M.Sc. Part II students after successful completion of three days workshop under MoU. News paper cutting: NA

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