



Ph : 080 – 26933221

BHS HIGHER EDUCATION SOCIETY

VIJAYA COLLEGE

R V ROAD, BASAVANAGUDI, BANGALORE – 560 004

(ACCREDITED BY NAAC WITH 'B' GRADE &
RECOGNIZED BY UGC AS CPE)

EMAIL ID :
principal@vijayacollege.ac.in

Microbiology workshop

A workshop was conducted by Microbiology department outdoors at REFSYN BIOSCIENCES PVT LTD, Pondicherry.

Date: 04-03-2020 Timing: 10.00AM to 04.00PM

WORKSHOP ON 'BIOANALYTICAL INSTRUMENTATION AND THE APPLICATIONS'

Department of Microbiology conducted an educational trip to Pondicherry for final year BcGMB students. On 4th March 2020 workshop was conducted on 'in REFSYN BIOSCIENCES PVT LTD.

REFSYN refers to reference synthesis which is a pharmaceutical company that prepare the reference standard of drug impurities. It is the 2nd largest drug metabolite production company in India. It follows

Indian Pharmacopoeia. Workshop was held by Dr. S .Geetha , Managing director and Mr. Srinivasan , Research Executive. REFSYN mainly consists of 3 departments

1. R&D department (Research and development).
2. Production department.
3. Quality analysis department .

During the workshop we learnt to handle the instruments and perform the following tests:-

- **TDS (Total dissolved solid)** – To check salt content in water.
- **Digital Vernier Caliper** – Easy-to-operate and portable tablet thickness testers for busy production environments Copley's range of calipers and thickness testers are simple and easy-to-use instruments, designed for use by the press operator on the compression floor. It is used to check the size of tablet.
- **Hardness Tester**-Tablet hardness testing is a laboratory method which is applied to measure the breaking point of a tablet. The procedure is an essential aspect of medicine production. Tablet hardness testing makes sure that solid tablets are hard enough to sustain mechanical strains during various situations like storage and packaging, delivery and handling by the user, among others. To check the hardness of the tablet.
- **Friability test**-Friability testing is used to test the durability of tablets during packing processes and transit. This involves repeatedly dropping a sample of tablets over a fixed time, using a rotating drum with a baffle. The result is inspected for broken tablets, and the percentage of tablet mass lost through chipping. To tests the durability of tablet during transport.
- **Disintegration Test**-This test determines whether dosage forms such as **tablets**, capsules, boluses pessaries and suppositories **disintegrate** within a prescribed time (**disintegration** time) when placed in a liquid medium under the prescribed experimental conditions. To check the solubility of the drug.



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- **UV Spectrophotometer**-The applications of quantitative analysis through spectroscopy allow for pharmaceutical researchers to clearly identify and compare organic compounds to ensure that the drug molecules are properly absorbed by the body and distributed to the right places. From the identification of active ingredients or protein analysis, each component of pharmaceutical research depends on spectrophotometers to provide qualitative analysis and exact drug formulations. To check the optical density of the drug.
- **HPLC(High pressure liquid chromatography)**- It is used for identifying , quantifying and purifying components in the mixture.
- **UV Transilluminator**-It used for visualization of target proteins.
- **Magnetic stirrer with hot plate**-To mix the liquid sample homogenously with optimal heating.
- **Vertical and horizontal gel electrophoresis**- Separation of DNA ,RNA and Proteins bands
- **Western blotting**-To transfer the protein bands from gel to nitrocellulose membrane.
- **Thermal cycler**-To amplify gene of interest using PCR.
- **Thin layer chromatography**-For detection of impurity in a pharmaceutical chemical.
- **Rotary Vacuum Evaporator**-Efficient and gentle removal of solvent from sample by evaporation.
- **Nephelometer** –To measure turbidity of liquid mixture/viscous sample.
- **Column Chromatography**- Used to isolate a single chemical compound from a mixture.
- **MALDI TOEF** –To check nature of protein and sequence of amino acid.
- **Soxhlet**- used for the extraction of desired compound this has limited solubility in a solvent.
- **Centrifuge**-Separation of components based on density.
- **pH meter** –To measure the ph of water and pharmaceutical's.
- **Incubator shaker**-To provide gentle agitation while maintaining optimal condition. •
Muffled furnace –Used in quality control for sulphated ash test.

It was a great opportunity to learn about the quality control of a synthesized drug and to detect any impurity in the final product. We also got an exposure to various career opportunities as microbiologist in pharmaceutical industries.





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BHS Higher Education Society
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Affiliated to the Bangalore University
Accredited with 'B' Grade by the NAAC
Accorded the "College with Potential for Excellence" by the U.G.C.

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Managing Director and R&D Director,
Refsyn Biosciences Pvt Ltd.,
No-28, Third cross Street,
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From

Dr. Madhumita Ghosh Dastidar
Associate Professor, HOD
Department of Microbiology,
Vijaya college, R.V.Road
Bangalore-560004

One Day Workshop

Topic : "Bioanalytical Instrumentation".
Date : March 5th 2020 (Thursday)
Time : 10.30 to 2.00pm
Venue : Refsyn Biosciences Pvt Ltd, Puducherry.
Students : 28
Faculty : 02

STUDENT NAME
1. AMREEN TAJ H
2. ANAGHA J
3. ATHIRA M
4. BHOOMIKA S
5. BUVANESHWARI S
6. DEVI SARANYA A
7. HARISH R
8. HARSHA N
9. JAYA RAGHAVENDRA K
10. KALPANA R
11. KASULA SUPRAJA
12. LAVANYA R
13. POOJITHA P L
14. PRAMODH S
15. PRIYANKA E
16. UTTARA R
17. RAKSHITHA R
18. SANJAY B G RAO
19. SHREYAS L SAVANTH
20. SINDHU R M
21. SOWMYA MURTHY
22. SREEVIDHYA S
23. SYED TAJ
24. SYEDA KASHIFA TARANNUM
25. SYEDA NARGIS MEHDI
26. URMILA H
27. VINUTHA V
28. YASHASWINI R
29. YASHIWANTH R