
**REPORT ON “NATIONAL LEVEL TRAINING CUM WORKSHOP ON DETECTION OF
POLLUTANTS IN ENVIRONMENT”**

Karpagam University

Department of Biotechnology

**NATIONAL LEVEL TRAINING CUM WORKSHOP ON DETECTION OF
POLLUTANTS IN ENVIRONMENT**

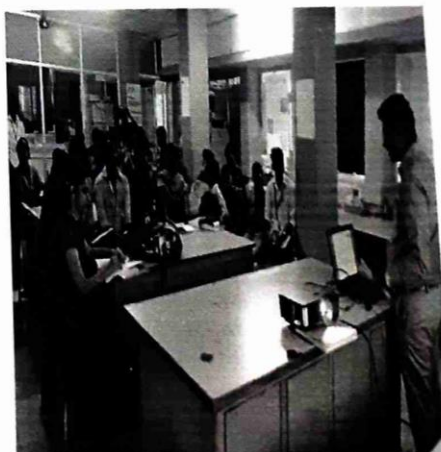
8th -10th February, 2017

Report

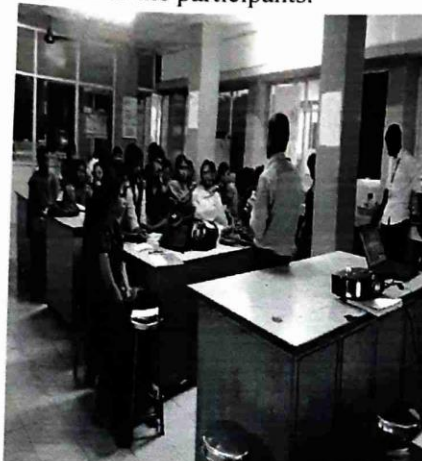
Indian National Science Academy (INSA), New Delhi sponsored National Level Training Cum Workshop on Detection of Pollutants in Environment was successfully conducted by the Department of Biotechnology, Karpagam University, Coimbatore, Tamil Nadu, India during 8th to 10th February, 2017 for B.Sc./ M.Sc., students and research scholars of Botany /Zoology/ Microbiology / Biochemistry / Biotechnology / Environmental sciences / Basic sciences / Life sciences/ B.E./ M.E/ M.Tech., students and research scholars of Biotechnology / Environmental Engineering/ Structural Engineering / Civil Engineering, Water Resource Management disciplines attended in this workshop. Totally 44 participants from various institutions like Hindusthan College of Arts and Science, Coimbatore; Sree Narayana Guru College, Coimbatore, Nirmala Arts and Science College, Kathir College of Engineering, Arumugam Pillai Seethai Ammal College, Thiruppathur, Sourashtra College, Madurai and Gowrie Research Centre, Gujarat had attended.

Day 1 (8th February, 2017)

The delegate **Dr. M.S. Lipin Dev**, Assistant Professor, Karpagam University delivered lecture on **“Chemical Preparation and Handling”**. He explained in detail about the physico-chemical parameter analysis such as pH, electrical conductivity, salinity, etc. In his lecture he explained about the detection of pollutants from waste water and the calculation for determining the quantity of pollutants present in the waste water. His lecture was very useful for the participants and many had raised their queries and all of them were explained clearly.

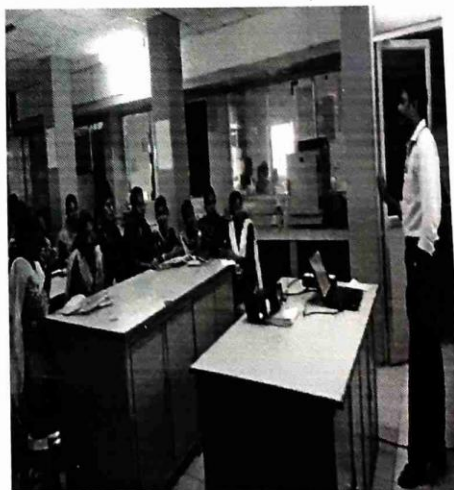


The second lecture was delivered by **Mrs. Patil Sunita Vishnu, Women Scientist – A (WOS-A)**, Karpagam University on **“Sample preparation and preservation”**. She explained the preparation and preservation of sample. The practical session was carried by **Dr. P. Rajiv**, Assistant Professor, Karpagam University. In this session, the hands on training in techniques such as pH, EC, turbidity, dissolved oxygen, total suspended solids, and total dissolved solids were given to the participants.



Day 2 (9th February, 2017)

The topic of **“Determination of cell line toxicity by pesticide and herbicide residues”** delivered by **Dr. R.M. Kalidas**, Assistant Professor, Department of Biotechnology, Karpagam University. He elaborated on the toxicity of pollutants such as pesticide and herbicide residues on the human cell lines. **Dr. R.S. Saranya**, Assistant Professor, Hindhustan Arts and Science College, Coimbatore delivered lecture on **“Assessment of Toxicity and Heavy metal analysis”**. She explained about the



heavy metals and their toxicity in living organisms. She demonstrated the detection of heavy metals in water and soil. The lecture was very useful to the participants.

The technical session was explained and performed by Dr. P. Rajiv, Assistant Professor, Karpagam University, COD, Microbial analysis such as media preparation, were explained and demonstrated.



Day 3 (10th February, 2017)

Dr. A. Sangilimuthu, Assistant Professor, Department of Biotechnology, Karpagam University delivered lecture on **“Detection of pollutants by GCMS, AAS, FTIR, UV-Visible Spectrophotometer”**. He described the different methods used for the preparation of samples and also demonstrated the working method for detection of pollutants by GCMS, AAS, FTIR, Uv-Visible Spectrophotometer. He also explains about the classification of chromatography. His talk was very informative and the students had learned the modern technology that is used for detection of pollutants.



Dr. S. Subha Priya, Assistant Professor, Department of Biotechnology, Sri Narayana Guru Arts and Science College, Coimbatore, had lectures on “**Antibiotic resistance and heavy metal resistance studies**”. She described the Antibiotic resistance and heavy metal resistance Microorganisms in the environment and their benefits. Her lecture was informative and she provided the methodology for isolating antibiotic and heavy metal resistance microorganisms from the environment. The Practical session was carried out by Dr. P. Rajiv, Assistant Professor, Department of Biotechnology, Karpagam University. In the technical session, biochemical analysis such as determination of Iron, Fluoride, Chloride and in physico-chemical parameter analysis like the total hardness of water was analysed.

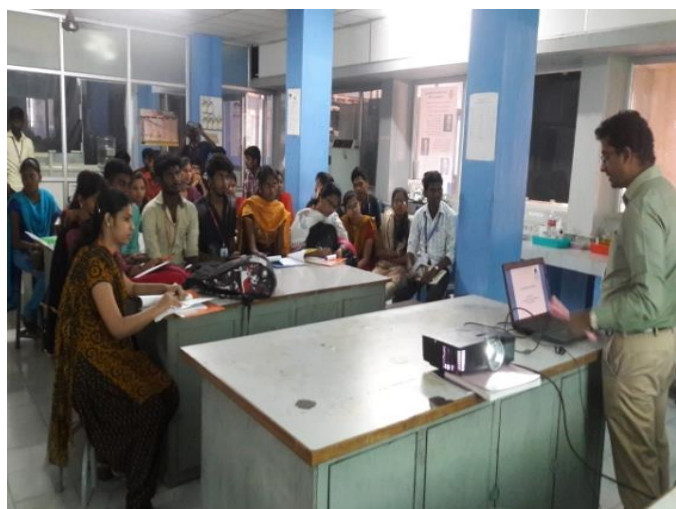


Dr. P. Rajiv, the organizing secretary of this programme thanked all the resource persons for coming over to Karpagam University, Coimbatore and delivering the lectures in the workshop. He thanked the Indian National Science Academy (INSA), New Delhi for sponsoring this workshop and also Karpagam University for their valuable support.



All the participants from in and around University were acknowledged for their active participation in the **Indian National Science Academy (INSA), New Delhi sponsored National Level Training Cum Workshop on Detection of Pollutants in Environment**. The conference ended with certificate distribution.







NATIONAL LEVEL TRAINING CUM WORKSHOP

ON

DETECTION OF POLLUTANTS IN ENVIRONMENT

8th - 10th, February 2017

Sponsored by

INDIAN NATIONAL SCIENCE ACADEMY

(INSA)
New Delhi



Organized by

DEPARTMENT OF BIOTECHNOLOGY



**KARPAGAM
UNIVERSITY**
Established Under Section 3 of UGC Act, 1956

KARPAGAM ACADEMY OF HIGHER EDUCATION

(Deemed University, Established under Section 3 of UGC Act 1956)

Pollachi Main Road, Eachanari Post,

Coimbatore - 641021.

ABOUT THE INSTITUTION

Karpagam Charity Trust was founded in the year 1989 with the aim of providing excellent educational facilities by imparting practical knowledge and skills to the youth and also catering the needs of the society in general through charitable deeds. The Karpagam Arts and Science College (Autonomous) evolved into Karpagam Academy of Higher Education in the year 2008 for the purpose of conferment of Deemed to be University status by **Ministry of Human Resource Development, Vide No. F.9.24/2004.U.3 (A) dated 25.08.08.**

The University Education, in today's scenario, is witnessing a huge paradigm shift and at Karpagam, we are geared to be part of that transformation. Our evolution into a University of world standard has been possible only by a consistent endeavor to achieve excellence in education and we work towards ensuring that our students too strive relentlessly to excel in their efforts. Be it Arts or Science, Commerce or Management, Humanities or Engineering we ensure that our education epitomizes excellence in every sphere.

Steered by the dynamic spirit of our President, Dr. R. Vasanthakumar, an eminent industrialist and philanthropist and the extensive experiences of Shri. K. Murugaiah, CEO, Dr. S. Sudalaimuthu, Vice-Chancellor and Dr. G. Sekar, Registrar of our Institution will continue to initiate the emergence of excellence.

Our Institution has been ranked under ELITE category for the quality of research (Current Science, 107:3-389-396, 2014) in India.

THE DEPARTMENT

The department of Biotechnology was established in 2001. The progress of the department is consistent over the years and presently holds many research projects funded by the DST, DBT and SERB. During the last 15 years, the department has made all round progress and is on par with well established departments of various University. Scholars in the department are pursuing research in the areas of Environmental Biotechnology, Nanobiotechnology, Food Technology, Fermentation Technology, Plant Tissue Culture, Animal Tissue Culture, Genetics and Molecular Biology, Microbial Technology and Phytochemistry.

This implies a set of laboratory techniques developed within the last 20 years that have been responsible for the tremendous scientific and commercial interest in biotechnology, the rise of many new companies and the redirection of research efforts and financial resources among established companies and universities. More than 75% of the students were placed in various companies during the last 5 years through our placement cell. Our students have received many awards from various Scientific Associations.

The Department has a well-furnished Microbiology lab, Biochemistry lab, Environment Biotechnology, Nanotechnology lab, Molecular Biology lab, Plant Tissue culture lab, Animal cell culture lab and Instrumentation lab, Walk-in cold room, computer lab and Central Instrumentation. Facility with well sophisticated instruments including HPLC, HPTLC, Flame photometer, AAS, FT-IR, UV-Visible Spectrophotometer, RT-PCR, Gel Documentation system, PCR, ELISA, Fermentor, Lyophilizer, Fluorescence microscope, Animal house facility etc., are available for teaching and research activities.

THE TRAINING CUM WORKSHOP

This workshop program focus on the recent trends and advances in environment sciences as a novel aid in environment welfare. The training will serve as a platform on various aspects in the fields of environmental sciences with special focus on improving the standard of classical and modern environmental research.

Eminent researchers and students from various streams of Biology are brought into a single rostrum, for gaining hands on experience by describing specific cutting edge in detection and estimation of pollutants. This will provide an opportunity to learn practical knowledge in Environmental Biotechnology, Environmental Sciences and Environmental Engineering.

This training will be an interactive and scientifically vibrant programme. It consists of various sessions including keynote address and laboratory sessions. Each session will be addressed by outstanding experts who will highlight recent advances in various aspects of environmental sciences. It is our privilege to train and promote young biologists, researchers and students from all over the country.

The main objective of the workshop is to create awareness and provide knowledge in environmental pollution. Hence, this will be an exciting time for students/ researchers and scientists to learn more about the recent laboratory techniques in Environmental Biotechnology for detecting and estimating pollutants in environment which would pave the way for an innovative progress in the field of life sciences.