

Date: 28th January, 2022
FRI, Dehradun

VIRTUAL WORKSHOP ON PRINCIPLES AND PRACTICES OF GC AND GC-MS TECHNIQUES

In commemoration of the 75th Year of India's Independence (*Azadi Ka Amrit Mahotsav*) Chemistry & Bioprospecting Division of Forest Research Institute, Dehradun organized a Virtual Work on "Principles and Practices of Gas Chromatography (GC) and Gas Chromatography-Mass Spectrometry (GC-MS) Techniques" on 28th January, 2022. More than 40 participants including Scientific and Technical Personnel, Students, research scholars and career aspirants from different parts of the India participated in this virtual event. Inaugurating the Workshop, Chief Guest of the Occasion, Shri Arun Singh Rawat, Director General, Indian Council of Forestry Research and Education (ICFRE), Dehradun emphasized that the continuous development of GC and GC-MS technology, such equipment are becoming more and more popular as an efficient, fast and sensitive analytical tools. He stated that Gas chromatography have opened up several areas of applications in pharmaceuticals, foods, cosmetics, flavours and fragrances, edible oils, forensics, petroleum and petrochemical industry, environmental monitoring, etc. thereby throwing new avenues for skilled professionals to meet the requirements of industry and research. Therefore, a sound knowledge of principles and practice of GC and GC-MS is a valuable asset both for learners and professionals. At the outset, welcoming the Chief Guest, Resource persons and workshop participants, Dr. Y.C. Tripathi, Head, Chemistry and Bioprospecting Division, FRI, Dehradun underlined the importance and advantages of GC and GC-MS technology in terms of high sensitivity, relatively cheap operating cost and versatility of applications. Dr. Tripathi stated that in view of contemporary and prospective application of GC and GC-MS, a sound knowledge of principles and practice of GC and GC-MS has become imperative for learners, career aspirants and professionals. He also told about the Workshop is well structured to provide theoretical and practical knowledge on various operational and analytical processes of GC and GC-MS through lectures and live demonstrations in virtual mode.

The technical session started with a lecture by Dr. V.K. Varshney, Scientist-G, Chemistry and Bioprospecting Division (C&BP Division), FRI, Dehradun on the topic "Gas Chromatography (GC) Technique" in which he explained the principle, instrumental components, operating procedures of Gas Chromatograph and its applications. Thereafter, Dr. Vineet Kumar, Scientist-G, C&BP Division, FRI talked about the Mass Spectrometry (MS) and its functions and applications in combination with Gas Chromatography. Subsequently Dr. S.S. Bisht, Scientist-D of C&BP Division spoke about the principle, instrumental components, operating procedures of GC-MS and its applications. Various aspects of instrumental operation, purpose-specific method development and varied applications of GC and GC-MS were explained by Shri Praveen Arya, Application Scientist, Agilent Technologies India Pvt Ltd through lecture and video presentation. Finally, Live demonstration of different analytical steps including sample preparation, programming, sample injection, data acquisition and interpretation and report generation was done by Shri A.K. Singh, Technical Officer, C&BP Division, FRI in association with Dr. V.K. Varshney. The technical session was followed by a Discussion and Feedback session in which participants raised their queries which were answered by the speakers to their satisfaction. All participants expressed their satisfaction and affirmed the workshop very enlightening and fruitful learning experience. The virtual workshop ended with the vote of thanks proposed by the Workshop Convener, Dr. V.K. Varshney.

