



# Government Degree College Kargil

Bagh e Khomeani Kargil, Ladakh Kargil-194103

## ACTIVITY REPORT

### workshop cum hands-on training on “Detection and Quantification of Secondary Metabolites”

<b>Date</b>	March 25, 2025	<b>Category</b>	workshop
<b>Department</b>	Department of Botany	<b>Committee</b>	N/A

Department of Botany, Government Degree College (GDC) Kargil, successfully organized a One-Day Workshop cum Hands-on Training on “Detection and Quantification of Secondary Metabolites”.

The event aimed to provide students with practical exposure to phytochemical analysis and the latest chromatographic and spectroscopic techniques.

The workshop was graced by the presence of Prof. Disket Angmo, Principal, GDC Kargil, along with faculty members from various life sciences departments and over 100 students from the Botany department. The sessions were conducted by Dr. Mohd Shabir, Assistant Professor, University of Ladakh, Kargil Campus, who served as expert resource person for the event.

The workshop commenced with a welcome address by Dr. Razia Parveen, Head, Department of Botany, GDC Kargil, who emphasised the significance of secondary metabolites in plant sciences, their medicinal potential, and the need for advanced research in this domain. This was followed by an introduction of the resource person by Rinchen Angmo, Assistant Professor, Botany, highlighting Dr. Shabir’s expertise in plant taxonomy, phytochemistry and analytical techniques.

To honour his contribution, Prof. Diskit Angmo, Principal, GDC Kargil, presented Dr. Shabir with a certificate of appreciation and commended the Department of Botany for organising such an academically enriching event. The workshop was structured into two key sessions, the morning and afternoon technical session.

Dr. Shabir delivered a comprehensive lecture on “Phytochemical Analysis and Antioxidant Study Using Chromatographic and Spectroscopic Techniques.” His presentation covered the importance of secondary metabolites in medicinal and pharmacological applications, Protocols for extract preparation from plant materials, Chromatographic techniques (Thin Layer Chromatography, Column Chromatography) for compound separation and Spectroscopic methods (UV-Visible Spectroscopy) for characterisation and quantification.

He also emphasised Ladakh’s rich floral biodiversity and its potential as a valuable source for bioactive secondary metabolites, encouraging students to explore ethnobotanical and phytochemical research in the region.

The post-lunch session focused on practical training, where students actively participated in Preparation of reagents for phytochemical analysis, Hands-on practice with Thin Layer Chromatography (TLC) and Column Chromatography for compound separation and Quantification of bioactive compounds using UV-Visible Spectroscopy.

The interactive session allowed students to gain first-hand experience in laboratory techniques and protocols, fostering critical thinking and scientific curiosity. The session concluded with a Q&A segment, where students engaged in discussions and clarified their doubts with the expert.

The event was moderated by Halima Sadiya and Leela Banoo (4th Semester, Major Botany), while rapporteurs Khairun Nissa and Fatima Zehra (6th Semester), along with Sakina and Nusrat (4th Semester, Major Botany), documented the proceedings.

The workshop concluded with a vote of thanks delivered by Dr. Tsetan Dolker, Assistant Professor, Department of Botany, GDC Kargil, expressed gratitude to the Principal, the resource person, faculty members, and students for making the event a success. This interactive and skill-based training session was highly appreciated by the participants, who found it invaluable in enhancing their understanding of phytochemical research and analytical techniques. The Department of Botany, GDC Kargil, remains committed to organising more such academic and research-oriented programs to foster scientific learning and innovation.

### Photo Gallery (3 Photos)

