Industrial Biotechnology Training
Herbal Extractions and Phytochemistry (Advanced)
Session 2021-2022

Module Content
Introductory Lecture - Demonstration of Instruments, Laboratory mathematics, Good Laboratory Practices and Safe Handling of Biomedical Waste
Solution Preparation – Normal, Molar and Percent Solution – 1 Day
Qualitative Screening of Secondary metabolites – 5 Days 1. Test for Tannins 2. Test for Phlobatannins 3. Test for Saponins 4. Test for Flavonoids 5. Test for Alkaloids 6. Test for Quinones 7. Test for Coumarin 8. Test for Terpenoids 9. Test for Cardiac glycosides
To learn the UV-Vis Spectrophotometer technique by Validating the Lambert and Beer law and preparation of BSA Protein Standard curve – 1 Day
Preparation of plant material – 1 Day
Extraction techniques to prepare Herbal extract from Medicinal plants – 2 Days
DPPH Free Radical scavenging Assay – 1 Day
Superoxide anion radical scavenging (SO) assay – 1 Day
Hydroxyl radical scavenging (HO) assay – 1 Day
Reducing power ability – 1 Day
Total Flavonoid content Determination – 1 Day
Total phenolic content Determination – 1 Day
Determination of sugar content in plant sample – 1 Day

Quantitative estimation of total protein in plant sample 1 Day
Determination of Vitamin C in plant sample 1 Day
Determination of Alkaloid content 1 Day
Determination of Lipid content in plant sample 1 Day
Protein profiling by SDS- PAGE - 2 Days
Viva and Presentation – 1 Day
Total 24 Days