



Department of Biotechnology	LP: BT22411
B.E./B.Tech/M.E/M.Tech : Biotechnology PG Specialisation : NA Regulation: 2022	Rev. No: 00
Sub. Code / Sub. Name : BT22411 ANALYTICAL TECHNIQUES AND INSTRUMENTATION LABORATORY	Date: 20.01.2025

Session No*	List of Experiments
1	Precision and accuracy of an experiment using absorption spectroscopy.
2	Validation of Beer Lambert law using $\text{KMnO}_4$ solution.
3	Determination of pKa value of 4-nitrophenol using absorption spectroscopy
4	Determination of molar absorptivity and stoichiometry of the Fe using 1, 10 phenanthroline.
5	UV spectra of nucleic acids.
6	Analysis of amino acids using Thin Layer Chromatography.
7	Analysis of plant pigments using column chromatography
8	Limits of detection using aluminium alizarin complex.
9	Chemical actinometry using potassium ferrioxalate.
10	Estimation of $\text{SO}_4^{2-}$ using Nephelometry.
11	Estimation of $\text{Al}^{3+}$ using Fluorimetry.
Content beyond syllabus (if any): Flame photometry and Liquid Chromatography	

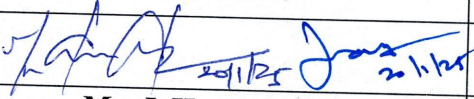

\* Session Duration: 200 minutes



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**Reference Books:**

1. Instrumental Methods of Analysis (2022) by Nalini C N, Pharmamed Press.
2. Instrumental Methods Of Analysis, 7E(Pb) (2023) Willard, CBS Publishers & Distributors Pvt. Ltd.

	Prepared by	Approved by
Signature		
Name	Mr. J. Hariharan & Dr. M. Nareshkumar	Dr. E. Nakkeeran
Designation	Assistant Professor	Professor & Head, Department of Biotechnology
Date	20.01.2025	20/1/25
Remarks* :	The same lesson plan will be used for the subsequent four years.	