



(Master of Science - Home Science) (Foods and Nutrition)
(M.Sc.-H.Sc.) (Foods and Nutrition) Semester (I)

Course Code	PH01CFDN52	Title of the Course	Practical based on PH01CFDN51 (Principles and Applications of Instruments and Techniques)
Total Credits of the Course	02	Hours per Week	04

Course Objectives:	1. The objective of the course is to acquaint the students with basic principle and applications of laboratory instruments and techniques
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Course Content		
Unit	Description	Weightage (%)
1.	Determination of λ max of a compound	10
2.	Verifying Lambert-Beer's law	10
3.	Acid-base titration using pH meter	10
4.	Use of fluorometer for studying fluorescent compounds (riboflavin)	10
5.	Separation of amino acids using paper chromatography	10
6.	Separation of β -carotene using adsorption chromatography	10
7.	Separation of lipids by TLC	10
8.	Separation of fatty acids by GC	10
9.	Separation of serum proteins by electrophoresis	10
10.	Visit to research laboratory having sophisticated instruments	10

Teaching-Learning Methodology	Classroom lectures (Blackboard), demonstration and than actual performance by students, discussion of results.
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Written / Practical Examination (As per CBCS R.6.8.3)	15%





SARDAR PATEL UNIVERSITY
Vallabh Vidyanagar, Gujarat
(Reaccredited with 'A' Grade by NAAC (CGPA 3.25))
Syllabus with effect from the Academic Year 2021-2022

2.	Internal Continuous Assessment in the form of Practical, Viva-voce, Attendance (As per CBCS R.6.8.3)	15%
3.	University Examination	70%

Course Outcomes: Having completed this course, the learner will be able to

1.	Prepare solutions/reagents for various practical.
2.	Learn to use basic laboratory instruments and acquaint with modern laboratory instruments.
3.	Understands the basic laws of spectroscopy and their applications in qualitative and quantitative analysis.
4.	Acquire skill of performing simple chromatography and electrophoresis.

Suggested References:

Sr. No.	References
1.	Nielsen, S. S. (2010). <i>Food analysis</i> , 3 rd Edition New York: Springer.
2.	Tomasino, S. (2000). <i>Official methods of analysis of AOAC International</i> .
3.	Raghuramulu, N., Nair, K. M., & Kalyanasundaram, S. (2003). <i>A manual of laboratory techniques</i> . (2 nd Eds.) National Institute of Nutrition, Hyderabad.

On-line resources to be used if available as reference material

On-line Resources

Journal of chromatography science, oxford Acedemic

Journal of chromatography B, Elsevier

Spectrophotometry - an overview, Science Direct

