



(Master of Science-Home Science) (Food Biotechnology)
(M.Sc.-H.Sc.) (Food Biotechnology) Semester (II)

Course Code	PH02CFBT55	Title of the Course	Practical based on PH02CFBT54 (Food and Nutraceutical Chemistry)
Total Credits of the Course	02	Hours per Week	04

Course Objectives:	The practicals will enable the students : 1. To gain knowledge of various techniques to measure antioxidants, pigments and anti-nutritional factors presents in plant foods 2. To understand the role of different sugars & amino acids in maillard reaction 3. To comprehend the effect of various ingredient on the quality of cake
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Course Content		
Unit	Description	Weightage (%)
1.	Market survey of existing health foods	10
2.	Estimation of total phenolics and flavonoid content	20
3.	Estimation of total antioxidant capacity (DPPHRS and FRAP)	20
4.	Estimation of total food pigments- lycopene, anthocyanin	20
5.	Effect of type of amino acid and sugar on Maillard reaction	10
6.	Estimation of phytic acid	10
7.	Effect of varying concentration of sugar, maida and baking powder on quality of cake	10

Teaching-Learning Methodology	Classroom lectures (use of blackboard), Demonstration and actual performance by the students
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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, (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.	Describe about the content of phenols, flavonoids and total antioxidant capacity of various plant foods.
2.	The students will also be able to discuss about the best combination of sugar & amino acid for maillard browning and also the standard formulation of cake preparation.

Suggested References:

Sr. No.	References
1.	Varley, H. (2005). <i>Practical Clinical Biochemistry</i> . (4 th edition) CBS publication.
2.	Raghuramula, N., Nair, K. M., & Kalyansundaram, S. (2003). <i>A manual of Laboratory Techniques</i> . National Institute of Nutrition (ICMR).
3.	Sadasivam, S. (1996). <i>Biochemical methods</i> . New age international.

