

Chemistry of Materials Lab

Course Code	19BS1151	Year	I	Semester	I
Course Category	Basic Sciences	Branch	CE	Course Type	Lab
Credits	1.5	L-T-P	0-0-3	Prerequisites	Nil
Continuous Internal Evaluation:	25	Semester End Evaluation:	50	Total Marks:	75

Course Outcomes	
Upon successful completion of the course, the student will be able to	
CO1	Illustrate different ores (Fe, Cr & Cu) and their usage.
CO2	Compare the viscosities of oils.
CO3	Experiment with the physical parameters of organic compounds.
CO4	Apply the TLC technique for the identification of organic compounds.
CO5	Analyze the quality of ground water sample.

Contribution of Course Outcomes towards achievement of Program Outcomes & Strength of correlations (H:High, M: Medium, L:Low)														
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	H		M											L
CO2	H		M											L
CO3	H		M											L
CO4	H		M											L
CO5	H		M											L

Syllabus		
Expt. No.	Contents	Mapped CO
I	Estimation of calcium in Portland cement	CO1
II	Determination of chromium (VI) in potassium dichromate	
III	Determination of viscosity of a liquid	CO2
IV	Determination of surface tension of a liquid	CO3
V	Determination of sulphuric acid in lead-acid storage cell	
VI	Determination of strength of an acid by pH metric method	
VII	Determination of Hardness of a ground water sample	CO5
VIII	Estimation of active chlorine content in Bleaching powder	CO3
IX	Thin layer chromatography	CO4
X	Preparation of Phenol-formaldehyde resin	CO3

Learning Resources
Text Books
1. Mendham J, Denney RC, Barnes JD, Thomas M and Sivasankar B Vogel's Quantitative Chemical Analysis 6/e, Pearson publishers(2000).
Reference Books
1. N.KBhasin and Sudha Rani Laboratory Manual on Engineering Chemistry 3/e, Dhanpat Rai Publishing Company(2007).
e- Resources & other digital material

<https://nptel.ac.in/courses/105105178/>
<http://202.53.81.118/course/view.php?id=82>