Laboratory Course (CHE-555L)

Block 1: Separation and qualitative Analysis general methods of binary organic mixture.

Experiment 1: Systematic procedure for the separation of diethyl ether Insoluble organic mixtures

Experiment 2**:** Systematic procedure for separation of organic mixture Based on salt formation – I

Experiment 3: Systematic procedure for separation of organic mixture Based on salt formation – II

Experiment 4: Systematic procedure for separation of organic mixture Based on salt formation – III

Experiment 5: Systematic procedure FOR Qualitative analysis of organic compounds

Block 2: Separation and identification of unknown binary organic mixture

Experiment 6: Identification of unknown binary organic mixture – I

Experiment 7: Identification of unknown binary organic mixture – II

Experiment 8: Identification of unknown binary organic mixture – III

Experiment 9: Identification of unknown binary organic mixture – IV

Experiment 10: Identification of unknown binary organic mixture – V

Experiment 11: Identification of unknown binary organic mixture –VI

Experiment 12: Identification of unknown binary organic mixture –VII

Experiment 13: Identification of unknown binary organic mixture –VIII

Experiment 14: Identification of unknown binary organic mixture –IX

Experiment 15: Identification of unknown binary organic mixture – X

Block 3: Separation and identification of ternary organic mixture

Experiment 16: General separation procedure for ternary organic mixture

Experiment 17: Identification of unknown ternary organic mixture – XVI

Experiment 18: Identification of unknown ternary organic – XVII

BLOCK 1: SPECTROMETRIC IDENTIFICATION OF ORGANIC COMPOUNDS.

Experiment 1: IR, Mass, ^{1}H NMR ^{13}C NMR, UV spectroscopy for Structure identification and Correlation tables.

BLOCK 2: DISCUSSES SOLVED PROBLEMS:

Experiment 2: Solved Spectral problem-1

Experiment 3: Solved Spectral problem-2

Experiment 4: Solved Spectral problem-3

BLOCK 3: PROVIDES PRACTICE PROBLEMS.

Experiment 5: Spectral problem-4.

Experiment 6: Spectral problem-5.

Experiment 7: Spectral problem-6.

Experiment 8: Spectral problem-7.

Experiment 9 : Spectral problem-8.

Experiment 10: Spectral problem-9.

Experiment 11: Spectral problem-10.

Experiment 12: Spectral problem-11.

Experiment 13: Spectral problem-12.

Experiment 14: Spectral problem-13.

Experiment 15: Spectral problem-14.

Experiment 16: Spectral problem-15.

Experiment 17: Spectral problem-16.

Experiment 18: Spectral problem-17.

Experiment 19: Spectral problem-18.

Experiment 20: Spectral problem-19.

Experiment 21: Spectral problem-20.

Experiment 22: Spectral problem-21.

Experiment 23: Spectral problem-22.

Experiment 24: Spectral problem-23.

Experiment 25: Spectral problem-24.

Experiment 26: Spectral problem-25.

Experiment 27: Spectral problem-26.

Experiment 28: Spectral problem-27.

Experiment 29: Spectral problem-28.

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CONTENTS

Block 1: More than one step Preparation of organic molecules.

Experiment 1: Preparation 2-Phenyl Indole.

Experiment 2: Preparation of 7-Hydroxy 3-methyl Flavone.

Experiment 3: Preparation of 2,5-Dihydroxy Acetophenone

Experiment 4: Preparation of Benzilic acid.

Experiment 5: Preparation of Benzanilide.

Experiment 6: Preparation of Caprolactam.

Experiment 7: Preparation of Acridone.

Block 2 : One step Preparation of organic molecules.

Experiment 8: Preparation of 4-Chloro Toluene.

Experiment 9: Preparation of Benzpinacol.

Experiment 10: Preparation of 7-Hydroxy Coumarin.

Experiment 11: Preparation of Photo dimerisation of Maleic anhydride.

Experiment 12: Preparation of Benzophenone.

Experiment 13: Preparation of Vanillyl alcohol.

Experiment 14: Preparation of Ortho and Para-Nitrophenol.

Block 3: Isolation of natural products from natural sources.

Experiment 15: Isolation of Piperine from peppers.

Experiment 16: Isolation of Caffeine from Tea leaves.

Experiment 17: Isolation of Cineole from Eucalyptus leaves.

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BLOCK 1: PREPARATION OF DRUG INTERMEDIATE.

Experiment 1: Preparation of Paracetamol

Experiment 2: Preparation of Phenytoin

Experiment 3: Preparation of 6-Methyl Uracil

Experiment 4: Preparation of Benzocaine

Experiment 5: Preparation of Chloritone

Experiment 6: Preparation of 4-Aminobenzene sulphonamide

Experiment 7: Preparation of Florescence

Experiment 8: Preparation of Antipyrine

Experiment 9: Preparation of Diazepam

BLOCK 2: ESTIMATION OF ASSAY OF DRUGS IN GIVEN TABLETS AND INJECTION BY NON INSTRUMENTATION:

Experiment 10: Esterification of assay of Aspirin

Experiment 11: Esterification of assay of Ibuprofen.

Experiment 12: Esterification of assay of Analgin.

Experiment 13: Esterification of assay of Ascarbic acid.

Experiment 14: Esterification of assay of of Ca^{+2} ions in calcium gluconate injection.

Experiment 15: Esterification of assay of chloride in ringer lactate solution for injection

BLOCK 3: ESTIMATION OF ASSAY OF DRUGS IN GIVEN TABLETS AND INJECTIONS BY INSTRUMENTATION:

Experiment 16: Esterification of assay of Sulphonilamides by potentiometric titrations

Experiment 17: Esterification of assay of riboflavin by colorimetric titrations.