

NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

NPTEL Video Course - Chemistry and Biochemistry - NOC:Experimental Biochemistry

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Co-ordinating Institute - IIT - Kharagpur

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

Lecture 1 - Introduction
Lecture 2 - Buffers
Lecture 3 - Introduction to Biochemistry Laboratory Equipments and Safety Measures
Lecture 4 - Practical Aspects of Making Buffer
Lecture 5 - Making Tris Buffer (pH=8.2)
Lecture 6 - Making Phosphate Buffer (100mM)
Lecture 7 - Amino Acids and Their Properties
Lecture 8 - Amino Acid Titrations
Lecture 9 - pI Determination of Glycine
Lecture 10 - pI Determination of Lysine
Lecture 11 - Summary
Lecture 12 - UV and Visible Spectroscopy
Lecture 13 - Fluorescence Spectroscopy
Lecture 14 - UV/Visible Spectra of Amino Acids and Proteins
Lecture 15 - Fluorescence Spectra of Amino Acids and proteins
Lecture 16 - Spectroscopic Techniques Summary
Lecture 17 - Protein Folding and Denaturation - I
Lecture 18 - Protein Folding and Denaturation - II
Lecture 19 - Urea denaturation of HSA studied by UV/Vis absorbance
Lecture 20 - Temperature denaturation of HSA studied by UV/Vis absorbance
Lecture 21 - Denaturation of HSA by GdnHCl studied by Trp fluorescence
Lecture 22 - Protein Folding and Denaturation Summary
Lecture 23 - Chromatographic Techniques - I
Lecture 24 - Chromatographic Techniques - II
Lecture 25 - Protein Purification by Size Exclusion Chromatography (SEC)
Lecture 26 - Protein Purification by Affinity Chromatography
Lecture 27 - Gel Electrophoresis of DNA and Proteins - Part I
Lecture 28 - Gel Electrophoresis of DNA and Proteins - Part II
Lecture 29 - Gel Electrophoresis of DNA and Proteins - Part II

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- Lecture 30 - Isolation and Characterization of Proteins Part - I
- Lecture 31 - Isolation and Characterization of Proteins Part - II
- Lecture 32 - Isolation and Purification of Proteins
- Lecture 33 - Quality and Quantity of the Isolated Protein
- Lecture 34 - Enzyme Kinetics - I
- Lecture 35 - Enzyme Kinetics - II
- Lecture 36 - Enzyme Kinetics (by using enzyme from apple juice)
- Lecture 37 - Enzyme Kinetics (by using enzyme from apple juice) (Continued...)
- Lecture 38 - Isolation and Characterization of DNA Part - I
- Lecture 39 - Isolation and Characterization of DNA Part - II
- Lecture 40 - Bacterial Culture for Plasmid DNA Isolation
- Lecture 41 - Isolation of Plasmid DNA
- Lecture 42 - Isolation and Characterization of DNA Summary
- Lecture 43 - Basics of rDNA Technology Part - I
- Lecture 44 - Basics of rDNA Technology Part - II
- Lecture 45 - Cloning
- Lecture 46 - DNA Transformation
- Lecture 47 - Protein-Ligand Interaction
- Lecture 48 - Protein-Ligand Interaction (Continued...)
- Lecture 49 - Interaction study of HSA protein with Curcumin and Gallic acid using UV-Vis spectroscopy
- Lecture 50 - Interaction study of HSA protein with Curcumin and Gallic acid using UV-Vis spectroscopy (Continued...)
- Lecture 51 - Analysis of the Structure of Protein ligand complex
- Lecture 52 - Immunoassay Techniques
- Lecture 53 - Western Blotting Technique