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Virtual University of Pakistan

CHE301

Analytical Chemistry &

Instrumentation

Created By TEAM VU BIO MATES

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1. What is chemical shift?
2. What is interface?
3. Protocol of dialysis?
4. Principle of UV-VIS?
5. Principle of dialysis?
6. Difference between flame atomizer and graphite tube atomizer?
7. Write names of commonly used impedance measuring system in flow cytometry?
8. Explain NMR Instrumentations?
9. Mention the parameters measured by the flow cytometry?
10. Define vu-vis light filter also give two names?
11. Define ICM and AES stands for?
12. Detail on blood fractionation?
13. Explain flow spectrometre application?
14. What instruments are use for flow spectrometry?
15. Explain NMR applications
16. What do you know about instrument of NMR?
17. Explain Gel filtration chromatography?
18. Various uv radiation sources in uv vi spectrum explain ?
19. Application of x.ray diffraction technonogy
20. Application ICP mass spectromter ?
21. Two example of auxochrome group?
22. Define Braggs law
23. Define dialysis
24. Give four name of the flow cytometer?

MCQS

1. _____ that determines the spatial arrangements of atoms or identifies the functional groups. (**Analytical chemistry**)
2. _____ a solvent that flows through the supporting medium. (**Mobile phase**)
3. A chromatographic method is called _____ if the stationary phase is solid. (**adsorption chromatography**)
4. In radial chromatography, the solvent rises through the wick and the components are separated _____. (**into concentric circles**)
5. In gel filtration chromatography, Molecules are eluted in order of _____ (**decreasing molecular size**).
6. _____ measures the mass-to-charge ratio of ions to identify and quantify molecules in simple and complex mixtures. (**Mass spectrometry (MS)**)
7. First usage of mass spectrometry was to _____ (**detect the isotopes.**)
8. _____ is the study of the interaction between matter and electromagnetic radiation. (**Spectroscopy**)
9. In GC-MS Samples are usually analyzed as _____ (**organic solutions**).
10. Gel filtration can be used to separate proteins by _____ at any point in a purification of a protein. (**molecular weight**)
11. _____ is reference compound in NMR. (**Recorder**)
12. UV-VIS spectrum results from the interaction of electromagnetic radiation in the UV-VIS region with molecules, _____ (**ions or complexes.**)

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13. NAD⁺ compound absorbs light in the _____ due to the presence of conjugated pi-bonding systems. (**UV range**)
14. An atom or molecule that fluoresces is termed a _____ (**Fluorophore**)
15. The light selected by the monochromator is directed onto a detector that is typically a photomultiplier tube, whose function is to convert the light signal into an electrical signal proportional to the light intensity is called _____ (**detector**)
16. When the molecule jumps from the higher energy level to lower energy level, a photon of energy is _____ (**emitted.**)
17. In AAS, the _____ produces a print on the chart. (**recorder**)
18. ICP-MS is an analytical technique used for _____ determinations. (**elemental**)
19. In ICP-MS, Electrostatic _____ that focus (positive) ions onto the entry to the true mass-spectrometer. (**lenses**)
20. _____ that use a diffraction grating monochromators to isolate the incident light and fluorescent light. (**Spectrofluorometers**)