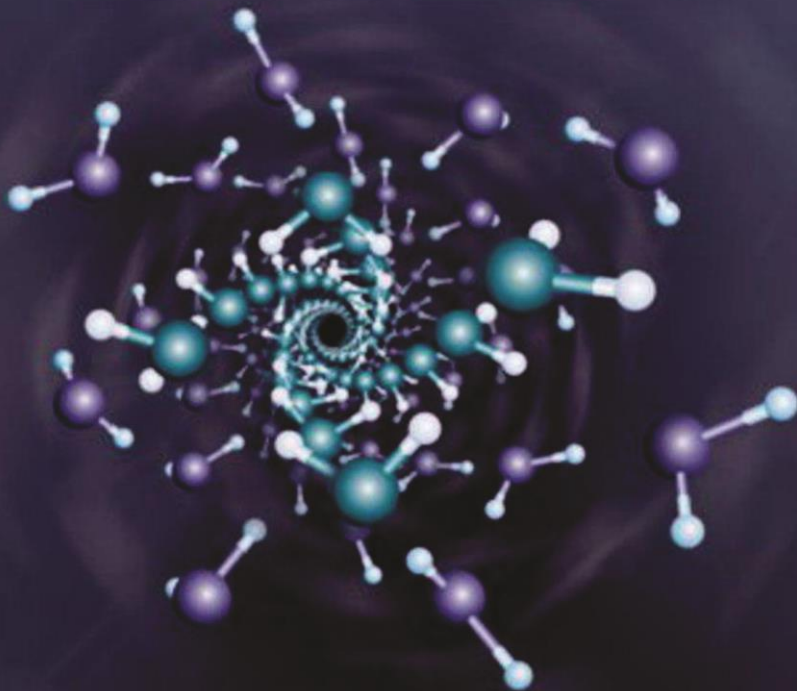


Summery for Book of Analytical chemistry

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The soluble agent is reduced and solvent must have strong absorbent at IR region. The First Kind cellules which are appropriate for volatile liquids and can not be separated for the purpose of cleaning are those with out penetration, or fixed thickness, the second kind cellules have twinkling capability and can be cleaning, and are called separable cells.

The solid sample

- 1) Preparing packed compacted pills
e.g. KBR pills
 - 2) The method of mixing with models
 - 3) Preparing Films which is so appropriate for polymers
- Gas samples



The Gas density is less than liquids so the light pathway toward gas must be greater.

The step and process of atom Formation.

(1) solvent transfer

1) the speed for transfer of sample and standard must be equal.

2) particling of the sample: the solution is changed to Particle and dust like materials.

Transfer of the particles

3) B. Installing of obstacles in disseminator champers, flame only. Attain particular places.

4) desolvating: The first step in flu is desolation



5) Fermentation: the salt particle is changed to steam and the reabsorb tin interaction is Formed

6) Balance between the Fermented Particle in this process interaction of ionized is formed.

7) Ionization flame: great amount of element which is ionized easily is added to flame. The equilibrium is shifted to left and dus prevented from ionrztion.

(2) Reflexion:

If the light meet to smooth surface and meeting waves transfer back again directly without deviation, then reflex ion occurs.

(3) Absorption: Is a process with energy transferring. Different



substances absorbs special liquids waves. In fact absorption is a molecular phenomenon which is related to chemical characteristic and structure of substances.

(4) Transfer: is the capability of light to penetrate a substance, occur this phenomenon is complement of absorption and is related to the quality and structure of substances.

(5) perspiration: This phenomenon is a physical process and occurs while light is encountered to the structure of it's similar wavelength scale.

photoelectric apparatus in spectrum:

UV-VIS cells microcells, cylindrical, standard 1- c m path, thermal- flow-



2- mm patch, 1mm Patchy 5mm patch source of Rod Talia:

Steam mercury lamp, Tangshan lamp: evacuating electrical Hydrogenic and Dotrimlamp.

Photo multiplier: amplify the outlet signal and flu photo voltage cell: change directly the sunlight to the Electricity.

Photo tube: Energetic photons in accouter with cathode separates the electrons.

Carrier Gas apparatus chromatography: Cerner, as Gasses like He, H₂, AR, N₂ which are chemically ineffective are utilized.



Injection system: Is in two inlet system one evaporating and second splitting

Column chromatography

Accumulative column: these columns are sort of Acetyl anti corrosive, glass or quarts capillary columns, their capacity is less than accumulated columns.

- 1) Thermal conductive detector (ICD)
- 2) Flammable ionization detectors (FID)
- 3) Electron attractor detector (ECD)

Privilege of changing noise spectrum

- 1) Improvement of sending signal to noise
- 2) Enhancement of speed, precision and separation ability



Preparing of samples

Liquide sample:

The solvent should be choosed for solution that has no spectrum infraction with sample and should solve the sample to a great amount, and preferably be nonpolar to avoid interaction

Abstraction

Chromatography: Is a method which recognize substances and depends on rational movement between two phase: one of them is Inert, the other is movement phase. It the moving phase is gas then it is called gas chromatography, and if the moving phase is liquid, it is called liquid chromatography.



1) gas, solid chromatography

In the Inert phase is solid Then is called gas solid chromatography

2) gas- liquid chromatography

It the inert phase is liquid then is called gas liquid chromatography.

The motive phase should be non effective gas so that cant react with solvent and sample. The inert phase should also be a liquid of unappro. Chable kind and should have different soluble capability HPLC, High proliferative liquid chromatography: this method has as high sensitivity and quantities appointment with high accuracy. And has capability of nonvolatile and is sensitive to temperature and has most



growth and effectiveness among separation method. In this kind of chromatography, the motive phase is liquid.

Reaction of light to substance the color of a substance is due to reaction between light and substance, the encountering light can penetrate the substance and or absorb it or reverse.

Reflex ion

When light encounters to substance then reflects to eye in a visible limit and with specific wavelength and the substance represents with particular color.

Piezoelectric detectors: In this detector the piezo electric substance (e.g. triglycylsulfato) is placed



between two plane of condenser and while this substance is exposed to IR radiation the change created in its structure lead with measuring and supporting of condenser flow, the potential of IR radiation can be measured.

6) Photo detectors: Including instruments distributing photons (photo multiplayers) attach instrument, (e.g. photo and photo transect or) photo conductor cells and photo voltage cells

Stabilizer: In the IR spectrometer stabilized pen is attached to weakening.



Monochromator: solves the problems of wandering light in the region of infrared.

Technique equipments in HPLC
Chromatography column

Use of narrow column lead to creation of

1) thinner and sharper pick and 2) reduce of sharper consumption 3) and better sanitation of detector

Technique instrument in mass analyzing spectrum

Import system: Is a system to evaporating of sample with low vapor pressure.

Ms- Ge instrument

In this structure the components of mixture is separated by Ge column



and after elimination of Q solvent gas the Jet is entered to a source of gas expectrometer.

Source of electron contact

In this method a narrow of energetic election contact to molecule and molecule changes to ion.

Technique instrument in infrared spectrum source of IT radiation.

1) source of clubber: This resource radiation is a rode made of carbide silicon or.

2) nerest radiation: this instrument consists of cylinder and contains rare oxidized elements.

3) Nicrom coil: alley made up of uncle and cr, and has less intensity



tan source of culbar and nerest reactor but more persistent.

4) capacity:

Mercury arc: this source is appropriate for infra red region.

5) filament contestant lamp: this is the simplest source of radiation for IR near rayon detectors or infra-red transformers.

1) Heat detectors: The answer is due to thermal effect of radiation and is appropriate in region for short wave (IR)

2) thermo couple: Thermal change between two different metal line exist in thermocouple, lead to creation of potential differences in two line and cold be intensify and measured.



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Thermistor or bolometer: is a kind of resistive thermometer which is made up of a thin film of metal oxide. If it is made of a semiconductor, then it is called a thermistor. The principle of operation of a bolometer is based on the change in resistance of a material when its temperature changes. The change in resistance is proportional to the change in temperature.

