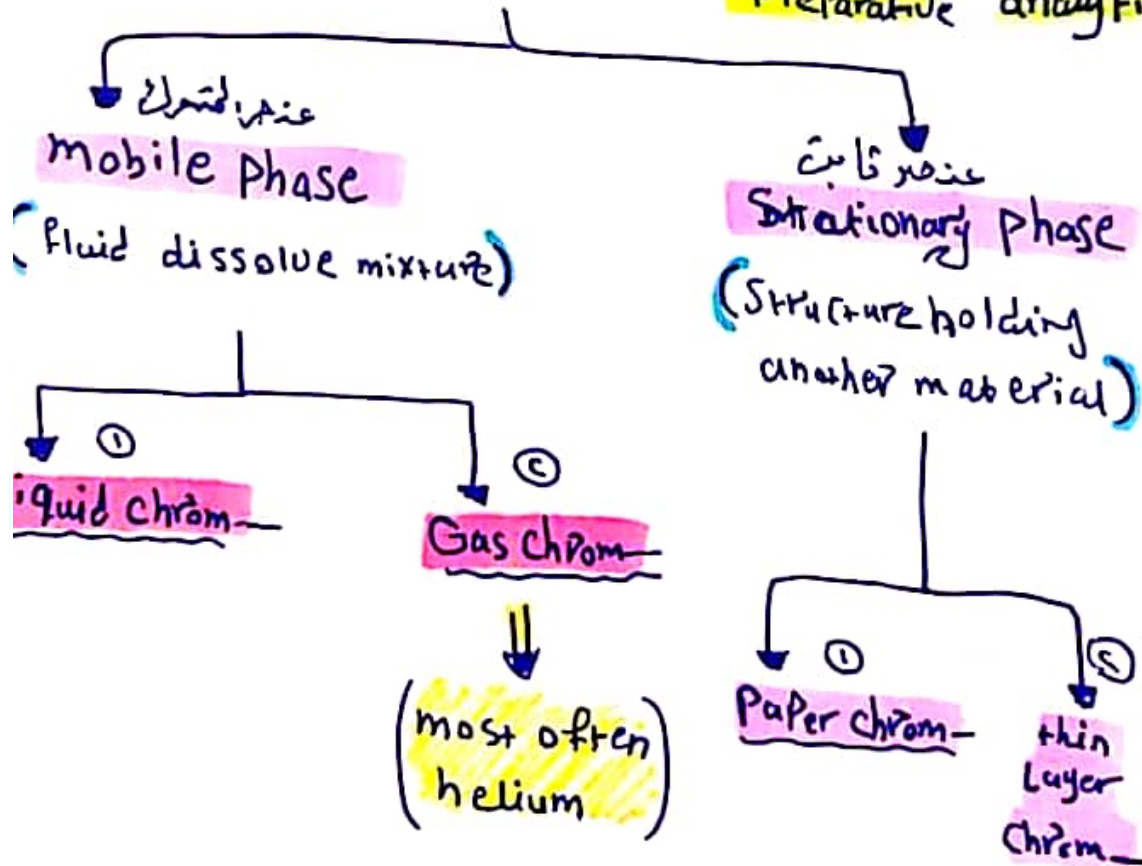


تخليص لـ HPLC chromatography

→ technique for separating mixtures into their components to analyze the mixture.

- analyze
- identify
- purify
- quantify

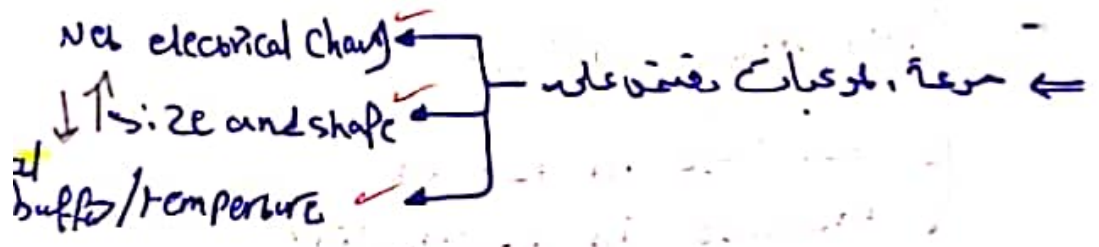
"Chromatography" → maybe
Preparative analytical



Calculation
- (molecular weight)
- (pI) - (pH)

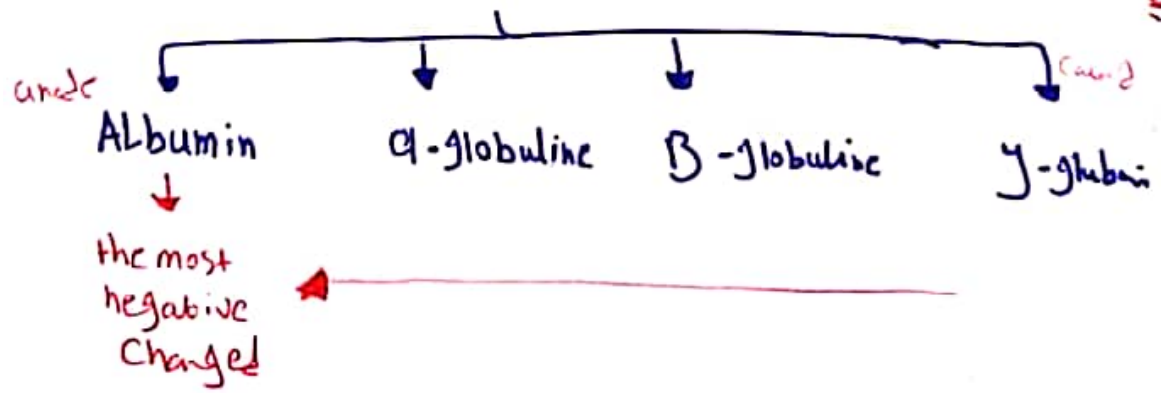
Electrophoresis :- migration of charged solutes in liquid medium under influence of electrical field.

- * Importance :-
- Separation of plasma protein
 - Separation of iso-enzymes
 - nucleic acids (DNA/RNA) *



→ Cathode → negative -
→ anode → positive +

plasma protein electrophoresis

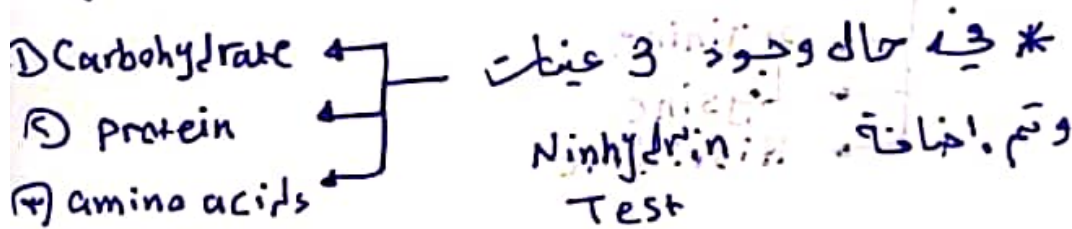


* Ninhydrin test → qualitatively.

- detect free amino acid and proteins.
- Amino acids (NH₂) react with ninhydrin
dark blue / Purple violet ←
- Sensitive test for amino acids.

* give → yellow ← (Proline) فقط ←

* because it has secondary amino acid group (NH).



الذي يحدث كالتالي -

* لا يتفاعل Ninhydrin مع Carbohydrate

* يتفاعل Ninhydrin مع direct amino acid

* يتفاعل Ninhydrin مع protein تسخين اولاً وينفك amino acid

Bradford method

* use Coomassie brilliant blue dye +

* to detection and quantitation of total protein

* لون البنية / reddish/brown

* وبعد خلطها مع Protein اللون blue

← dye يتفاعل مع (basic amino acid)

→ arginine
→ Lysine
→ Histidine

← يتم استخدام جهاز (SPECTROPHOTOMETER)

من أجل absorbance

* من أجل معرفة Protein concentration

عن طريق Standard curve

Clinical

- Myelomas and lymphoma
(increase in immunoglobulins β - γ)
- Nephrotic Syndrome
(decrease in albumin
increase in α_2 -globulin)
- AIDS
(decrease or loss γ -globulins)