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Excipients that interfere with pharmaceutical analysis



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ILOS



- Define excipients
- Define pharmaceutical analysis
- Identify excipient that interference with pharmaceutical Analysis.



Define excipients

An excipient is an inactive substance formulated alongside the active ingredient of a medication, for the purpose of bulking-up formulations that contain potent active ingredients.

- ❑ Pharmaceutical Excipients used in pharmaceutical
- ✓ Fillers, Lubricants , Preservatives , Antioxidants Flavoring Agents, Coloring Agents, Sweetening Agents



Define Pharmaceutical analysis

- The pharmaceutical analysis is a branch of chemistry, which involves the series of process for the identification, determination, quantitation, and purification.
- This is mainly used for the separation of the components from the mixture and for the determination of the structure of the compounds.



Excipients that interfere with pharmaceutical analysis

- The analyte is removed from materials in a formulation matrix which would interfere in its analysis using a solvent in which it is highly soluble but in which the matrix interferants have limited solubility. Further solvent partitioning steps may then be used in order to reduce the interferants.



Excipients that interfere with pharmaceutical analysis

❖ Tablets and capsules

The most commonly used filler in tablets is lactose and other popular fillers include other sugars or sugar polymers such as cellulose, starch and mannitol.

The fillers themselves do not absorb UV light so they are not likely to interfere directly in HPLC procedures



Excipients that interfere with pharmaceutical analysis

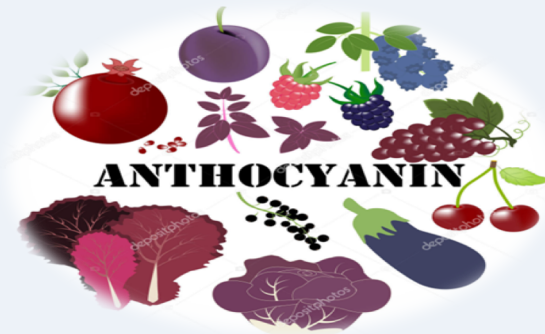
❖ Lubricants

- They only comprise at most 1–2% of the tablet bulk, so their potential to interfere is slight, particularly since their chromophores are weak.
- These coatings are used at about 3% of the tablet bulk, are water soluble and do not absorb UV light

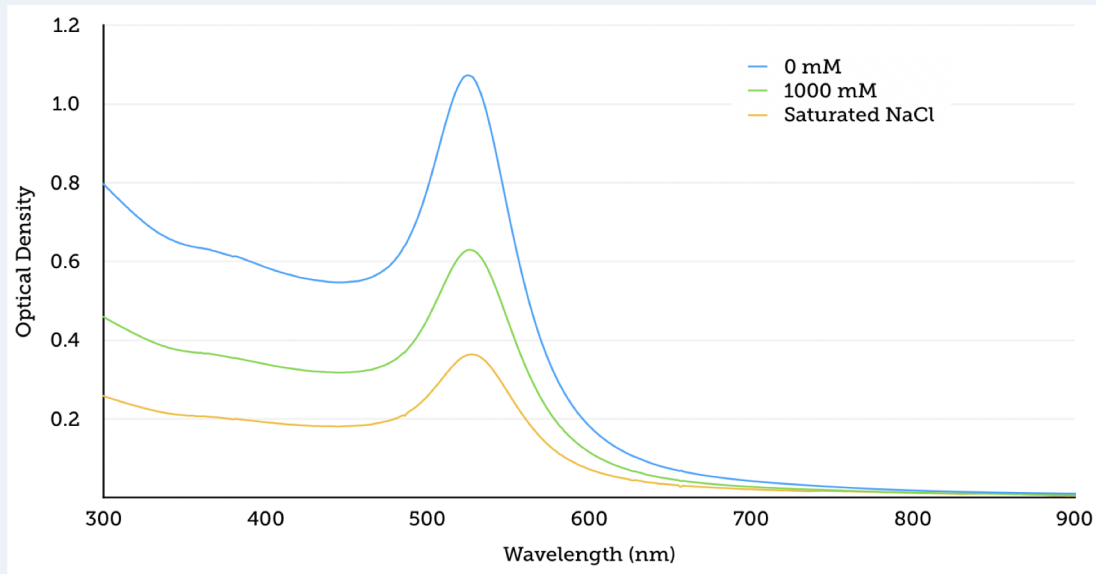


Suspensions and solutions

The dyes used are water soluble and include natural pigments such as chlorophylls, carotenoids and anthocyanins, and coal-tar-based dyes.



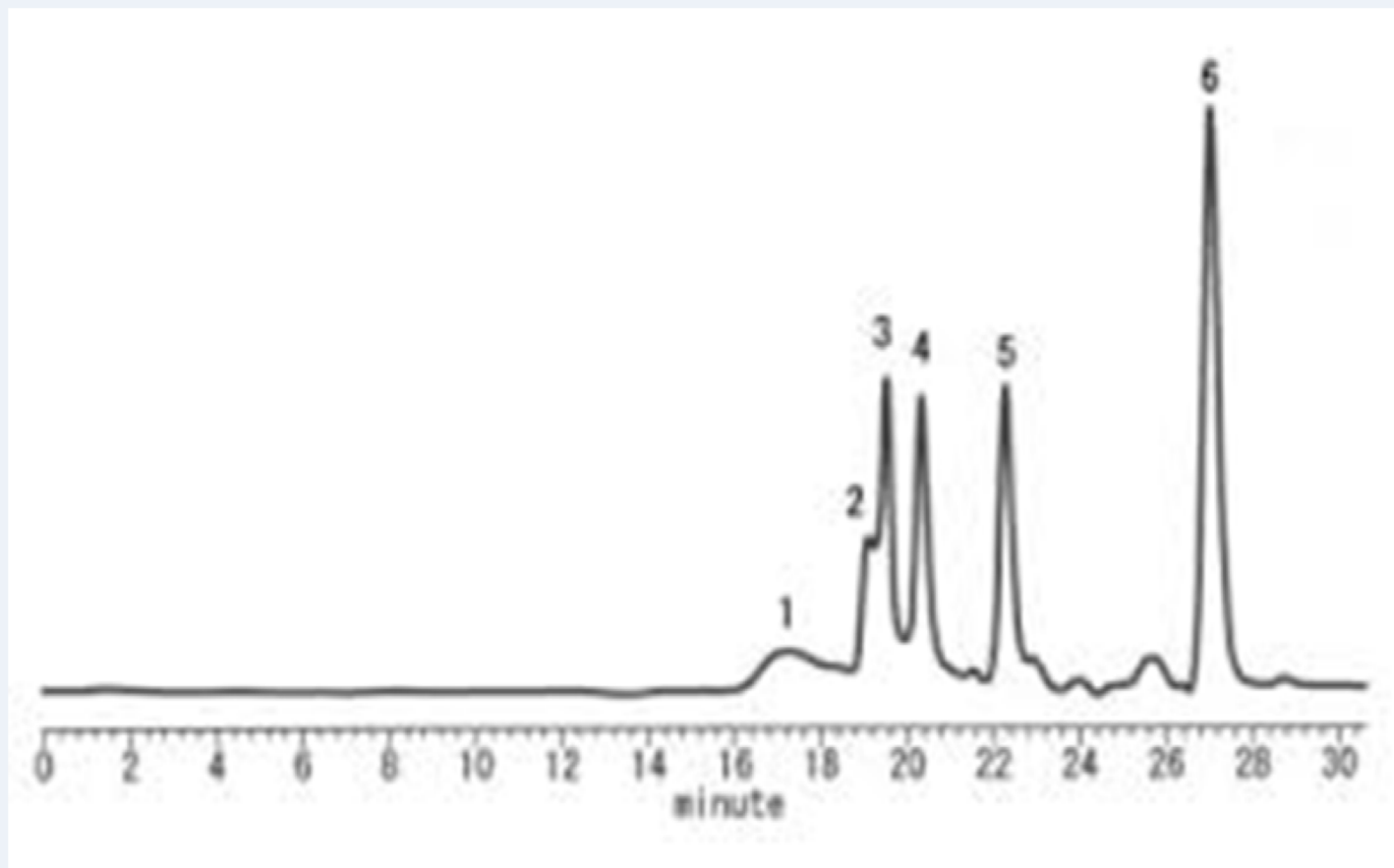
- Suspensions also contain surfactant materials such as the polyethylene
- glycol-based detergents but these compounds do not have appreciable UV absorbance and thus have little potential for interference



Creams and ointments

- Sodium and potassium salts of fatty acids, cationic surfactants and non-ionic surfactants are used in creams and ointments. Creams and ointments contain large amounts of oily triglycerides, especially with reverse-phase HPLC columns.





summary

- Excipient is an inactive substance formulated alongside the active ingredient of a medication, for the purpose of bulking-up formulations that contain potent active ingredients
- The pharmaceutical analysis is a branch of chemistry, which involves the series of process for the identification, determination, quantitation, and purification.
- Excipients that interfere with pharmaceutical analysis



References

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Thank you