

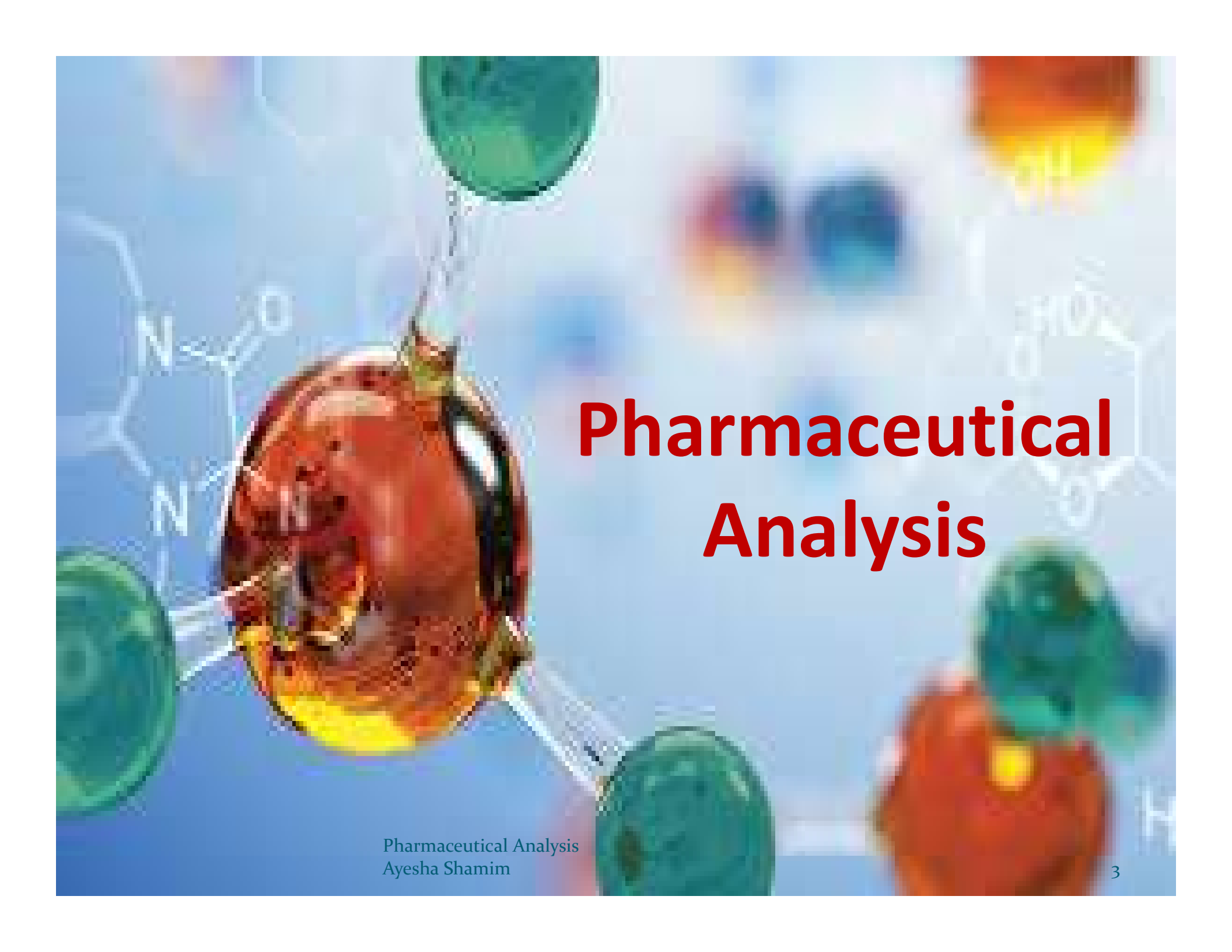
Pharmaceutical Analysis

Ayesha Shamim
Pharm. D
M.phil

Pharmaceutical Analysis
Ayesha Shamim

- Definition
- Introduction
- Application
- Course Outline





Pharmaceutical Analysis

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Definition

- Pharmaceutical Analysis may be defined as
- The application of analytical procedures used to determine the purity, safety and quality of drugs and chemicals.



This course has access to the full range of


- Titration method
- Spectroscopic technique
- Chromatographic method
- Spectrophotometry etc.



Analytical Tools Study of other analytical tools include:

- Differential scanning calorimetry (DSC)
- Differential thermal analysis (DTA)
- Near infrared detectors(NIR)

These all are thermo analytical methods.

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- An aqueous acid–base titration is the determination of the concentration of an acid or base by exactly neutralizing the acid or base with an acid or base of known concentration.
 - This allows for quantitative analysis of the concentration of an unknown acid or base solution.
 - Spectroscopy is the science which deals with the interaction between a matter (atom/molecule) and an electromagnetic radiation.



Chromatography is usually a technique for separating and / or identifying the components in a mixture.

It is powerful method in industry. Some major types of chromatography:

- Paper chromatography
- Gas chromatography
- Liquid chromatography
- High performance liquid chromatography
- Gel filtration chromatography



Course Outline

SPECTROSCOPIC METHODS:

Theory, Instrumentation and Pharmaceutical Applications of

- a. Atomic Absorption and Emission Spectroscopy
- b. Molecular Fluorescence Spectroscopy
- c. Flame Photometry
- d. I.R. Spectroscopy
- e. Mass Spectroscopy
- f. NMR Spectroscopy
- g. U.V./Visible Spectroscopy



Course Outline

CHROMATOGRAPHIC METHODS:

- Column Chromatography,
- Thin Layer Chromatography,
- Gas Liquid Chromatography,
- HPLC,
- LCMS,
- GCMS,
- Capillary Electrophoresis.

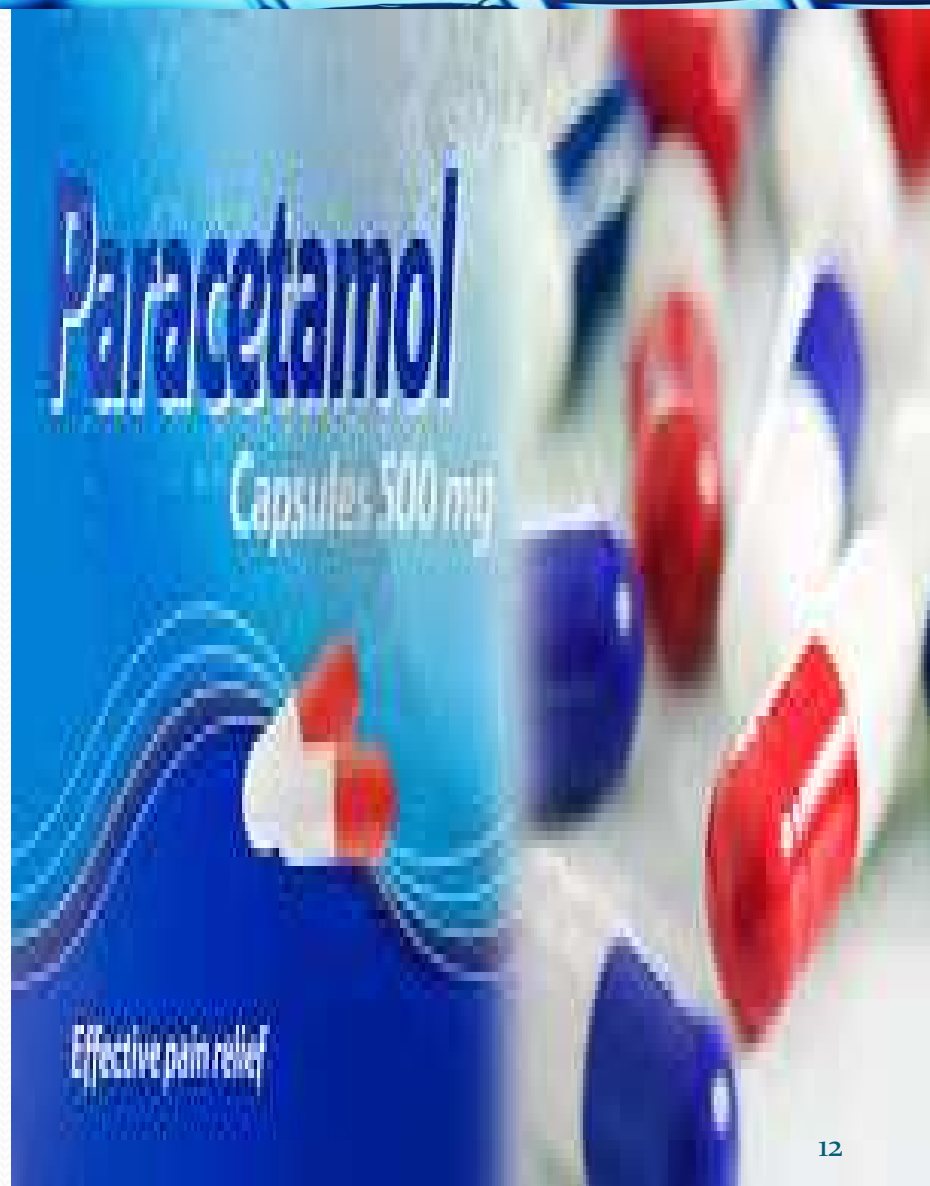


Applications

- Identity of the drug in the formulated product.
- stability of the drug.
- Rate of drug from its formulation.
- Identity and purity of pure drug that meet specification.
- concentrations of specified impurities.
- concentrations of drug in plasma or biological fluids.
- determine pka values, partition coefficients, solubilities, and stability of drug under development.



- Determination of active ingredient or additional impurities.





Thank You!

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