

Experiment 1

Introduction to Instrumental Analysis, Pharmacopoeias and Monographs

- Analytical methods are classified as being either classical (wet-chemical methods) or instrumental.

Comparison	Analytical Methods	
	Classical	Instrumental
Descriptive ← (Qualitative analysis) <u>Separation of components by</u>	Precipitation, extraction, distillation	Chromatographic and electrophoretic techniques
Numerical ← (Quantitative analysis) <u>Determination of the analyte amount by</u>	Gravimetric or volumetric measurements	Electrode potential, conductivity, light absorption or emission, mass to charge ratio measurements

- Instrumental Analysis: Applying the newer methods for separating and determining the chemical species and their amounts.

Block diagram showing the overall process of instrumental measurements



- Specifications: Explicit set of requirements to be satisfied by a material or product. Should a material or product fail to meet one or more of the applicable specifications, it may be referred to as being **out of specification**; the abbreviation **OOS** may also be used.
معلومات التحليل
- Test Method: Technical analysis (analytical procedure) applied on a material or product, to determine the material/ product compliance with the relevant specifications.

* هو عبارة عن اختبار على العينة عشان اتأكد إذا المواد مطابقة للـ Specifications

- Pharmacopoeia: A reference book for pharmaceutical drugs' specifications, test methods and other relevant data concerning drugs, excipients and analysis.

* إذا عني دواء وبدي
اتأكد من الدواء مطابق للقوانين .

- Monograph: Includes the name of the ingredient or preparation; the definition; packaging, storage, and labeling requirements; the specifications, test procedures and acceptance criteria.

الاسم التجاري ممكن يكون فيه

- **International Pharmacopoeias and Their Contents**

the Most
Common.

- ✚ United States Pharmacopoeia (USP)
- ✚ British Pharmacopoeia (BP)
- ✚ European Pharmacopoeia (Ph. Eur.)
- ✚ Japanese Pharmacopoeia (JP)

الجدول بتفرجينا كيف نقسيم الفارماكوبيا عشان لما نيجي نبحث فيهم بالريپورت ، ما عنا علم إذا حفظ أو لا ، بكرا بنتأكد من د. لبنى وبنبعت مسج عالقناة بالجواب

USP		Brief Description
# of volumes	3	
Contents of volume 1	General notices	Include remarks such as: - The rounding rules - Meanings of certain terms used within the Pharmacopoeia (ex. Tight container)
	General chapters Each chapter is assigned a number between brackets < > such as <11>	Include description of: - General tests such as: - Microbiological tests - Apparatus for tests and assays - Chemical tests and assays - Physical tests and determinations - General information such as: - Quality assurance in pharmaceutical compounding - Good storage and shipping practices - Analytical instrument qualification - Dietary supplements
	Reagents	Include description of: - Reagents - Indicators - Solutions
	Reference tables	Include tables concerning solubilities, atomic weights, ... etc
	Dietary supplements	Include monographs for the dietary supplements
	National Formulary (NF)	Include monographs for the excipients
	Index	---
Contents of volume 2	General notices	As in volume 1
	Official Monographs	Monographs for the drug substances and products organized alphabetically
	Index	---

Contents of volume 3	General notices	As in volume 1
	Official Monographs	Monographs for the drug substances and products organized alphabetically and they are continuation of those included in volume 2
	Index	---

BP		Brief Description
volumes	Veterinary Volume + 5 Volumes for human medicinal substances and products	
Contents of veterinary volume	General notices	Include remarks such as: - Meaning of general terms - Solubility descriptive terms
	Monographs	- Introduced alphabetically
	IR spectra	---
	Appendices	---
	Index	---
Contents of volume 1 & volume 2	General notices	As described above
	Monographs	Monographs of drug substances only and organized alphabetically
Contents of volume 3	General notices	As described above
	General monographs	Monographs describing tests of a dosage form (ex. Oral liquid tests)
	Monographs	Monographs of drug products only and organized alphabetically

Contents of volume 4	Herbal drugs	General notices General monographs (ex. Tincture tests) Monographs of herbals
	Homoeopathic preparations	General and specific monographs
	Blood related products	General and specific monographs
	Immunological products	General and specific monographs
	Radiopharmaceutical preparations	General and specific monographs
	Surgical materials	Specific monographs
Contents of volume 5	General notices	As described above
	IR spectra	---
	Appendices	Reagents General test methods; equivalent to general chapters in USP
	Supplementary chapters	Explanatory and other ancillary texts
	Index	---



Artery Academy

Done by Saja DW