

## **Laboratories of Pharmacy Department**

### **1. Analytical Chemistry Lab**

This lab demonstrates the principles learnt in the analytical chemistry course. The lab is divided into 14 sessions that demonstrate chemical analysis using titration and the principles of measurements in science.

Examples of the experiments include the analysis of some drugs according to pharmacopeial methods such as the determination of aluminium and magnesium hydroxides in antacids, determination of iron content in medicines using reduction-oxidation titrations.

#### **Available Instruments:**

- Titration Setups
- PH Meters
- Analytical Balances
- Water Baths
- Various Glassware

### **2. Instrumental Analysis Lab**

This lab is an application of the theoretical materials in the Instrumental Analysis course. Students conduct the analysis of various medicinal substances using compendial methods, such as the analysis of vitamin B12 content, measurement of glucose levels, determination of the acidity constant of weak acids and measurement of pH.

#### **Available Instruments (Available at the Faculty of Sciences):**

- Spectrophotometer
- Polarimeter
- Flame atomic emission
- High-performance liquid chromatography (HPLC)

### **3. Pharmaceutics Lab**

The students learn how to prepare various pharmaceutical dosage forms such as solutions, suspensions, emulsions, ointments and creams, suppositories and capsules.

#### **The laboratory has the Following Instruments:**

- Compounding Tools (Mortar and Pestles, Ointment Tiles, Basins, and Various Glassware)
- Manual Capsule Filling Machines
- Suppository Molds
- Analytical and Electronic Balances
- Manual Tableting Machine

#### **4. Pharmacognosy Lab**

This course aims to provide pharmacy college students the knowledge to recognize medicinal plants micro and macroscopically which they need them for their works in hospitals, Ministry of Health (Drug registration Department) also useful in the Pharmaceutical industry. This lab also aims to teach students some of practical skills in phytochemical extraction and identification of medicinal plants by many instruments.

#### **Available Instruments:**

- Microwave apparatus for the extraction of essential aromatic oil
- Shaker
- Evaporator
- Freeze dryer
- pH meter

#### **5. Physical Pharmacy Lab**

The students perform experiments on solubility, diffusion, thermodynamics, study of distribution phenomena, adsorption and interfacial phenomenon, drug degradation kinetics, and drug dissolution.

#### **Available Instruments:**

- Spectrophotometer
- Viscometer

- Dissolution Apparatus
- Disintegration Apparatus
- pH Meters
- Titration Setup
- Water Baths
- Hot Plates
- Balances
- Separatory Funnels

## **6. Pharmacy Research Lab**

In this lab, students perform the experimental work for their graduation projects or small research projects assigned by faculty members. This lab is used by both undergraduate and postgraduate students and is supervised by a lab technician to assist the students in their work.

### **Available Instruments:**

- Centrifuge
- Sonicator
- Rotary Evaporator
- UV Visualization
- Vortex Mixer
- Incubator
- Cell Counter
- Laminar Flow Hood
- Autoclave
- PH Meters
- Balances
- Microscopes