

## **Minimum Standard List of Laboratory-wise Equipments/ Machineries**

**Any Pharmacy Department Running a B. Pharm. Program Must  
Contain the Following Minimum Instruments in Their Laboratories**

(The laboratories and their instruments listed here are only a suggestive minimum. Any university may create more number of laboratories or include more instruments in their laboratories.)

### **1) Inorganic and Physical Pharmacy Lab.:**

	<b>Name of Instruments</b>
1	Analytical Balance
2	Bunsen Burner and Gas
3	Burette, Pipette and Glassware
4	Chiller
5	Clamp with Stand
6	Condenser
7	Deionization Water System
8	Desiccators
9	Drying Oven
10	Extraction Device
11	Fume Hood
12	Humidity Controlled Stability Ovens
13	Karl Fischer Apparatus
14	Melting Point Apparatus
15	Mortar and Pestle
16	pH Meter
17	Rotary Evaporator
18	Sonication Bath
19	Suction Pump
20	Titration Apparatus
21	Top Loading Balance
22	UV Spectrophotometer
23	Water Bath

## 2) Pharmacognosy and Phytochemistry Lab.:

	<b>Name of Instruments</b>
1	Analytical Balance
2	Bunsen Burner and Gas
3	Burette, Pipette and Glassware
4	Cepha Column
5	Clamp with Stand
6	Column Chromatography
7	Digital Colony Meter
8	Dryer
9	Fume Hood
10	Grinding Machine
11	Heating Mantle
12	Homogenizer
13	Incubator
14	Milling Machine
15	Moisture Balance
16	Paper Chromatography
17	pH Meter
18	PTLC
19	Reflux Flask with Condenser
20	Rotary Evaporator
21	Sohxlet Apparatus
22	Sonicator
23	TLC Chamber and Sprayer
24	UV Spectrophotometer
25	Vacuum Pump
26	Water Bath
27	Water Distillation Plant

## 3) Organic Pharmacy and Medicinal Chemistry Lab.:

	<b>Name of Instruments</b>
1	Analytical Balance
2	Bunsen Burner and Gas
3	Burette, Pipette and Glassware

4	Fume Hood
5	Heating Mantle
6	Hot Plate Magnetic Stirrer
7	Karl Fisher Titration Apparatus
8	Magnetic Stirrer
9	Micropipette
10	Pumpette
11	Reaction Chamber
12	Solvent Purification System
13	Stability Chamber
14	TLC Plate
15	UV Spectrophotometer
16	Vacuum Pump
17	Water Bath
18	Water Distillation Plant

#### 4) Pharmaceutical Analysis Lab.:

	<b>Name of Instruments</b>
1	Analytical Balance
2	Bunsen Burner and Gas
3	Burette, Pipette and Glassware
4	Colorimeter
5	Conductivity Meter
6	Flame Photometer
7	Fume Hood
8	Hot Extraction Equipment
9	HPLC
10	Humidity Control Oven
11	IR Spectroscopy
12	Karl Fisher Apparatus
13	Melting Point Apparatus
14	pH Meter
15	Polarimeter
16	Potentiometer
17	Titration Apparatus

18	Tray Dryer
19	Turbidity Meter
20	UV Visible Spectrophotometer
21	Vacuum Pump
22	Water Bath
23	Water Distillation Plant

### 5) Physiology and Pharmacology Lab.:

	Name of Instruments
1	Analgesimeter
2	Analytical Balance
3	Anatomical Models (Heart, Brain, Ear, Eye, Stomach Pancreas, Kidney, Liver, Intestines, Reproductive System etc.)
4	Anatomical Specimen
5	Balance for Weighing Small Animals
6	Balance for Weighing Small Animals
7	Blood Analyzer
8	Centrifuge Machine
9	Clamp with Stand
10	Colorimeter
11	Digital Microscope
12	Dissecting (Surgical Instrument) Box
13	Fast Aid Box
14	Frog Board
15	Glassware
16	Hemocytometer
17	Human Model
18	Kymograph Machine
19	Micropipette
20	Microscope
21	Plethysmograph
22	Rabbit/ Rat/ Mice Cage
23	Slide and Cover Slips
24	Sphygmomanometer

25	Top Loading Balance
26	Vortex Mixer

### 6) Microbiology Lab.:

	Name of Instruments
1	Analytical Balance
2	Bunsen Burner and Gas
3	Glassware
4	Aseptic Cabinet
5	Autoclave
6	Centrifuge Machine
7	Colony Counter
8	Digital Colony Meter
9	ETP Plant
10	Hot Air Oven
11	Hot Plate
12	Incubator
13	Laminar Air Flow
14	Membrane Filter
15	Micropipette
16	Microscope
17	Petri Dishes
18	Refrigerator
19	Viscometer
20	Water Bath
21	Water Distillation Plant

### 7) Pharmaceutical Technology and Cosmetology Lab.:

	Name of Instruments
1	Prescription Balance
2	Blender
3	Capsule Selector
4	Capsule Filling Machine
5	Capsule Polishing Machine

6	Coating Machine
7	Dissolution Tester
8	Distillation Unit
9	Glassware
10	Double Cone Blender
11	Drum Mixer
12	Friability Tester
13	Glassware
14	Granulating Sieve Set
15	Grinding Mill
16	Hardness Tester
17	Homogenizer
18	Mechanical Stirrer
19	Hot Air Oven
20	Pestle and Mortar
21	Refrigerator
22	Suppository Moulds
23	Tablet Coating Pan
24	Tablet Disintegration Machine
25	Tablet Machine
26	Top Loading Balance
26	Viscometer

### 8) Biopharmaceutics and Pharmacokinetics Lab.:

	Name of Instruments
1	Analytical Balance
2	Dissolution Tester
3	Distillation Unit
4	Friability Tester
5	Glassware
6	Hardness Tester
7	Mechanical Stirrer
8	Mortar and Pestle (Porcelain and Glass)
9	Oven
10	Refrigerator

11	Tablet Disintegration Machine
12	Glassware
13	Tensile Tester
14	Top Loading Balance
15	UV Spectrophotometer

### 9) Computer Lab.:

	Name of Instruments
1	Air Conditioner
2	Computers Connected with Internet
3	Desktop
4	Do Printer
5	Laptop
6	Seat Capacities

### 10) Medicinal Plant Garden:

	Information Details	Description
1	Area (Sq feet)	2,000 (Minimum)
2	No. of Plants	50 (Minimum)
3	Scientific Name with Family Attached with the Plants	
4	Use of Plants Attached with the Plants	

### 11) Animal House:

	Criteria	Description
1	Area (Sq feet)	200 (Minimum)
2	Do Air Conditioners	
3	Do Dust Management System	
4	No. of Cages	20 (Minimum)
5	No. of Mice/ Rat being Maintained (at a time)	100 (Minimum)
6	No. of Mice/ Rat per Cage	10 (Maximum)
7	Proper Care of Animals with Food and Water Supply	