**Lab Equipments and their uses**

**Thermocycler**: It will be used (amplification), to make multiple copies of DNA isolated from the collected strains for their molecular characterization

**Gel Electrophoresis Apparatus**: Used for DNA, RNA, and protein analysis, separate proteins by charge and or size

**Gel Electrophoresis imager:** It will be used to get the images/bands of targeted DNA, RNA, and protein

**Hemocytometer**: It is used to count the fungal spores/conidia

**Water Bath**: It will be used for assure an even and stable temperature to the DNA after centrifugation process. The object can be heated or cooled in a controlled manner

**Shaking Incubator**: It used for uniform biological growth, cell aeration and solubility studies. In addition to stable temperature conditions, they use an orbital agitation at variable speeds to affect the growth of cell cultures, to give continuous shaking to the culture

**Laminar Flow Chamber** is required to isolate the fungal pathogens associated with disease specimens. A closed chamber is needed, although, a laminar flow chamber is present in the department but it is mainly being used students both at under and postgraduate level for bacterial plant pathogens. So in order to avoid the contamination with other microorganisms, another laminar flow chamber is required.

**Autoclave** is required to sterilize the glassware and culture media.

**Tissue Homogenizer** is required for grinding the material used in the experiments

**Vortex** is required to get through mixing of the material

**Dry Oven** is required for dry sterilization of the glassware to avoid the contamination

**Digital Balance** required for accurate and precise measurements of the chemicals used for experiments

**Micro Pipette sets** required to measure the chemicals and other material at micro level

**Colony counter** required to measure the colonies of different fungal pathogens

**Microwave Oven** required for thawing of Medias

**Magnetic Stirrer** is required for the preparation of inoculate and also for the preparation of chemical solutions.

**Cooling Unit** is required for the lab to maintain the desired temperature for conducting *in vitro* experiments.

**Refrigerator** is required to store the plant disease specimens and bacterial isolates for future use.

**Computer** is required to maintain the records of the project and for the operation of internet facilities in order to keep in touch with the recent advancements related with the proposed research project.