

What are you going to Do in your lab?

1. Micro-propagation higher costs, more expensive equipment/facilities
2. Basic cell culture lower cost lab

Basic Requirements for a Tissue Culture Laboratory

1. Equipment and Apparatus microscope, LAF, incubator (CO₂?), Refrigerator, Glassware, NUNC Plastic ware, dissection tools
2. Washing and storage facilities
3. Media Preparation Room
4. Sterilization Room
5. Aseptic chamber for culture
6. Culture rooms or incubators
7. Light & humidity control devices
8. Observation/recording area with a computer for data processing

Other Facilities

1. Hand washing area
2. Fire extinguishing system
3. Waste disposal facilities

Location

-beside a biology laboratory, particularly molecular biology laboratory (or a molecular biology laboratory should be beside a culture laboratory)

-far from other laboratories that handle dirty or pathogenic materials, e.g. microbiology laboratory

->Could be positioned in different ends of a building

->Or different floor of a building

->Large-scale culturing facility should not be at the same building with microbiology laboratory at all.

Sectioning the Laboratory

-Flow of laboratory, with consideration for...

1. Sterility washing area should not be in the centre of culturing area
2. Convenience washing area should be beside media preparation area
3. Human movement culturing area should not be near the entrance of the laboratory
4. Area size sectioning is more effective than wall-up different areas if area allocated is small
5. Laboratory throughput high throughput laboratory would have wider walkway as well
6. Type of research may need to allocate space for a gene gun or when working with Agrobacterium, or microinjection
7. Location of equipment electrical appliances should be near plug points, distillation unit should be near a tap
8. Future laboratory expansion -

Design

- a) Plant Tissue Culture Lab with equipment
- b) Animal Cell Culture Lab with equipment

Simple Tissue Culture Lab Set-up

