# Cheatography

# PTC - C6 (Lab Layout and Equipment) Cheat Sheet by woozing via cheatography.com/146689/cs/31812/

# What are you going to Do in your lab?

| 1. Micro-propag-      | higher costs, more expensive equipment/facil- |
|-----------------------|---|
| ation                 | ities   |
| 2. Basic cell culture | lower cost lab                                |

# Basic Requirements for a Tissue Culture Laboratory

1. Equipmentmicroscope, LAF, incubator (CO2?), Refrigerator,andGlassware, NUNC Plastic ware, dissection toolsApparatus

- 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.



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# Sectioning the Laboratory

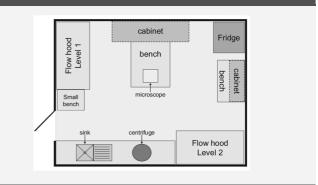
| -Flow of laboratory, with consideration for |  |  |
|---|--|--|
| 1. Sterility                                | washing area should not be in the centre of culturing area   |  |
| 2. Conven-<br>ience                         | washing area should be beside media preparation area   |  |
| 3. Human<br>movement                        | 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<br>research                      | may need to allocate space for a gene gun or when<br>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<br>laboratory<br>expansion        | -  |  |

### Design

a) Plant Tissue Culture Lab with equipment

b) Animal Cell Culture Lab with equipment

# Simple Tissue Culture Lab Set-up



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