Biosafety Level II
Suitable for work involving *agents of moderate potential hazard* to personnel and the environment.
**Biosafety Level 2**

**Introduction**

Examples:
- *Measles virus*
- *Salmonellae*
- *Toxoplasma spp.*
- *Hepatitis B virus*

* Immunization or antibiotic treatment is available
Biosafety Level 2

Introduction

Examples:

- Bloodborne pathogens
- Human body fluids/particularly when visibly contaminated with blood

* Extreme precaution with contaminated needles or sharp instruments
Examples of Blood borne Pathogens

- Human Immunodeficiency Virus (HIV)
- Hepatitis B Virus (HBV)
- Hepatitis C Virus (HCV)
Biosafety Level 2
Facility Design (Secondary Barriers)
Biosafety Level 2
Facility Design (Secondary Barriers)

Requirements:

- *Laboratories have lockable doors*
- *Sink for hand washing*
- *Work surfaces easily cleaned*
- *Bench tops are impervious to water*
- *Sturdy furniture*
Biosafety Level 2
Facility Design (Secondary Barriers)

Requirements (cont.):

- *Biological safety cabinets installed as needed*
- *Adequate illumination*
- *Eyewash readily available*
- *Air flows into lab without re-circulation to non-lab areas*
- *Windows fitted with flyscreens*
Biosafety Level 2
Facility Design (Secondary Barrier)

Restricted access when work in progress
Biosafety Level 2
Laboratory Facilities (Secondary Barriers)

- BSL-1 Facilities PLUS:
  - Autoclave available
  - Eyewash station available
**Biosafety Level 2**

Facility Construction (Secondary Barrier)

**Requirements:**

- **Location** - separated from public areas
- **Structure** - normal construction
- **Ventilation** - directional
As in BSL-1
In addition to BSL-1:

- *Use biosafety cabinets (class II) for work with infectious agents involving:*
  - Aerosols and splashes
  - Large volumes
  - High concentrations
Biosafety Level 2
Safety Equipment (Primary Barriers)

- Class II Biosafety Cabinet
  - Airflow

![Diagram of Class II Biosafety Cabinet with airflow](image)
Biosafety Level 2

Safety Equipment (Primary Barriers)

- Class II Biosafety Cabinet
  - Equipment layout
Biosafety Level 2

Safety Equipment (Primary Barriers)

- Class II Biosafety Cabinet
  - Technique
Supervision

- Supervisor is a competent scientist with increased responsibilities
  - Limits access if immunocompromised
  - Restricts access to immunized

Lab Personnel

- Aware of potential hazards
- Proficient in practices/techniques
Needles & Sharps Precautions

- *Use sharps containers*
- *DON’T break, bend, re-sheath or reuse syringes or needles*
Needles & Sharps Precautions (cont.)

- DON’T place needles or sharps in office waste containers
Needles and Sharps Precautions (cont.)

- DON’T touch broken glass with hands
Needles and Sharps Precautions (cont.)

- Use plasticware
Biosafety Level 2
Special Practices

- Policies and procedures for entry
- Biohazard warning signs
- Biosafety manual specific to lab
- Training with annual updates
Biosafety Level 2

Special Practices

- Use leak-proof transport containers
Biosafety Level 2
Special Practices

- Decontaminate work surfaces
- Report spills and accidents
- No animals in laboratories