# Summary of Recommended Biosafety Levels for Infectious Agents

<table>
<thead>
<tr>
<th>BSL</th>
<th>Agents</th>
<th>Practices</th>
<th>Safety Equipment (Primary Barriers)</th>
<th>Facilities (Secondary Barriers)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Not known to consistently cause disease in healthy adults</td>
<td>Standard Microbiological Practices</td>
<td>None required</td>
<td>Open bench top sink required</td>
</tr>
</tbody>
</table>
| 2   | Associated with human disease, hazard = percutaneous injury, ingestion, mucous membrane exposure | BSL-1 practice plus:  
- Limited access  
- Biohazard warning signs  
- "Sharps" precautions  
- Biosafety manual defining any needed waste decontamination or medical surveillance policies | Primary barriers = Class I or II BSCs or other physical containment devices used for all manipulations of agents that cause splashes or aerosols of infectious materials; PPEs: laboratory coats; gloves; face protection as needed | BSL-1 plus:  
- Autoclave available |
| 3   | Indigenous or exotic agents with potential for aerosol transmission; disease may have serious or lethal consequences | BSL-2 practice plus:  
- Controlled access  
- Decontamination of all waste  
- Decontamination of lab clothing before laundering  
- Baseline serum | Primary barriers = Class I or II BSCs or other physical containment devices used for all open manipulations of agents; PPEs: protective lab clothing; gloves; respiratory protection as needed | BSL-2 plus:  
- Physical separation from access corridors  
- Self-closing, double-door access  
- Exhausted air not recirculated  
- Negative airflow into laboratory |
| 4   | Dangerous/exotic agents which pose high risk of life-threatening disease, aerosol-transmitted lab infections; or related agents with unknown risk of transmission | BSL-3 practices plus:  
- Clothing change before entering  
- Shower on exit  
- All material decontaminated on exit from facility | Primary barriers = All procedures conducted in Class III BSCs or Class I or II BSCs in combination with full-body, air-supplied, positive pressure personnel suit | BSL-3 plus:  
- Separate building or isolated zone  
- Dedicated supply and exhaust, vacuum, and decon systems  
- Other requirements outlined in the text |

---