

DANGER

CHEMICAL, PLANT PROTECTION PRODUCT (PPP), AND STORAGE CONTROL PROTOCOLS

WHO GACP and EU/US FDA cGMP Guidelines



PRIMARY SAFETY RULES

- **Authorized Access:** Access to the chemical repository and mixing vault is strictly restricted to certified, pre-approved, and authorized facility personnel who have completed mandatory safety training.
- **Mandatory PPE:** Approved chemical-resistant personal protective equipment (PPE), including splash-proof goggles, heavy-duty nitrile gloves, and protective aprons, must be worn at all times within this zone.
- **Procedure Control:** Personnel must execute all chemical handling, concentration calculations, and application procedures explicitly in accordance with approved facility safety mandates.
- **Spill Isolation:** To prevent environmental contamination or structural runoff, all hazardous liquid chemicals must be stored exclusively within designated, secondary containment zones or spill pallets.

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INCIDENT & SPILL PROTOCOLS

- **Emergency Evacuation:** Personnel must initiate official facility emergency shutdown and containment evacuation procedures immediately if the cleanroom atmosphere, vault security, or structural safety is compromised
- **Fire Response Protocols:** In the immediate event of an active structural fire inside the repository, personnel must immediately deploy a designated, rated fire extinguisher if the hazard is highly localized and manageable, or execute an immediate facility evacuation. Personnel are strictly prohibited from delaying evacuation to reference documents.
- **Chemical Spill & SDS Isolation:** In the event of a liquid chemical spill, container leak, or accidental product reaction, personnel must immediately deploy specialized facility spill kits and refer directly to the master Safety Data Sheet (SDS) binders mounted outside the vault to execute safe neutralizing loops.
- **Immediate Reporting:** Workers are legally required to report all chemical leaks, container

DANGER

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CHEMICAL & STORAGE CONTROL

punctures, skin exposures, fire extinguisher discharges, or environmental spills to an active facility supervisor immediately for formal documentation.

- **Container Labels:** Quality assurance must ensure all secondary chemical containers, spray bottles, and sanitizing reservoirs are clearly, properly, and permanently labeled with the correct substance name and hazard symbols.
- **Vapor Segregation:** All active chemical procedures must include ventilation shields to completely prevent chemical runoff, aerosol overspray, or chemical vapor cross-contamination of live plant tissues or finished products.
- **Formula Precision:** Personnel must measure, dilute, and deploy all cleanroom sanitation chemical solutions strictly as directed by the master manufacturing formulas to protect material surface integrity.

DANGER

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PLANT PROTECTION PRODUCTS (PPP) APPLICATION ACCESS

- **Locked Repository:** All agricultural crop-protection agents, bio-rational inputs, and Plant Protection Product (PPP) concentrates must be stored inside a locked, dedicated, temperature-controlled facility repository vault at all times
- **Key-Log Custody:** Physical access keys, electronic swipe access records, and PPP inventory deployment log ledgers must remain strictly controlled by authorized quality management.
- **Certified Applicators:** Only certified, authorized agricultural applicators who hold valid regional or national licenses may physically handle, measure, or mix concentrated Plant Protection Product (PPP) formulations.
- **Respiratory & Face Protection:** Personnel must equip an approved half-face or full-face cartridge respirator and a splash-proof clear face shield during active chemical pouring, dilution, and mixing cycles to prevent toxic vapor inhalation or ocular exposure.



PLANT PROTECTION PRODUCT (PPP) PPE MANDATES:

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CHEMICAL & PPP STORAGE CONTROL

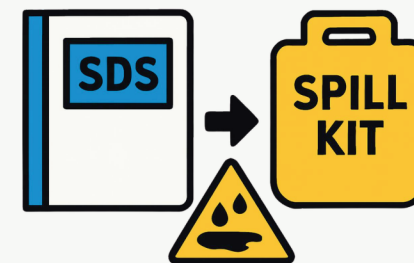
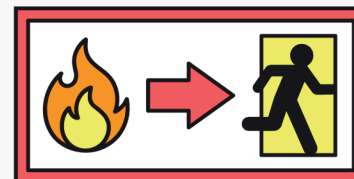
WHO GACP and EU/US FDA cGMP Guidelines
PART 1: CHEMICAL HANDLING & SAFETY

PRIMARY SAFETY RULES:

- **Authorized Access:** Access to the chemical repository and mixing vault is strictly restricted to certified, pre-approved personnel.
- **Mandatory PPE:** Approved chemical-resistant PPE, including splash goggles, nitrile gloves, and aprons must be worn.
- **Spill Isolation:** Store hazardous liquid chemicals exclusively within designated secondary containment zones or spill pallets.

INCIDENT & SPILL PROTOCOLS:

- **Fire Response:** Immediately discharge a designated, rated extinguisher or execute an emergency evacuation loop. Never delay evacuation to read documents.
- **Chemical Spills:** Deploy specialized facility spill kits immediately and refer directly to the exterior-mounted SDS binders to manage liquid leaks.
- **Incident Reporting:** Workers are legally required to report all chemical leaks, container punctures, skin exposures, or extinguisher discharges to a supervisor immediately.



Company Name: [EDIT HERE]

Applicable Area: [EDIT HERE]

SOP Reference: [EDIT HERE]

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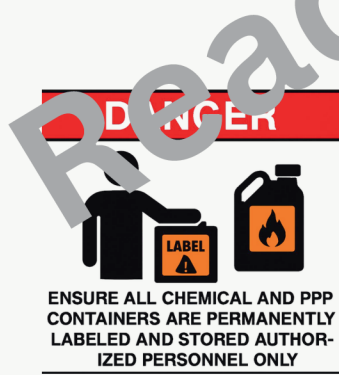
PART 2: COMPLIANCE & PPP MANAGEMENT

CHEMICAL & STORAGE CONTROL:

- **Container Labels:** Ensure all secondary containers, spray bottles, and sanitizing reservoirs are clearly and permanently labeled.
- **Vapor Segregation:** Deploy ventilation shields during active compounding to completely prevent vapor cross-contamination.
- **Key-Log Custody:** Physical access keys and PPP inventory log ledgers must remain strictly controlled by authorized quality management.

PLANT PROTECTION PRODUCTS (PPP) ACCESS:

- **Certified Applicators:** Only certified, licensed applicators may physically handle or mix concentrated PPP formulations.
- **24-Hour Lockout:** Enforce a strict 24-hour Restricted Entry Interval (REI) post-application via active magnetic room lockouts.
- **Post-App Cleanup:** Wash gloved hands before gear removal; isolate reusable respirators strictly inside the chemical vault.



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PART 3: MANDATORY PPE FOR PPP MANAGEMENT

RESPIRATORY & FACE PROTECTION:

- **Cartridge Respirator:** Wear approved respirators when handling concentrates.
- **Full Face Shield:** Equip a clear splash shield during chemical pouring.
- **Ocular Seal:** Ensure safety goggles are tightly sealed to the skin.



POST-APPLICATION PROTOCOLS:

- **Decontamination Wash:** Clean gloved hands thoroughly before gear removal.
- **Isolate Reusable Gear:** Store clean respirators inside the chemical vault.
- **Hazardous Disposal:** Drop single-use gear into designated waste bins.

DERMAL BODY BARRIERS:

- **Fluid-Proof Apron:** Don a chemical-resistant apron over scrubs.
- **Sleeve Isolation:** Tuck long sleeves completely into glove gauntlets.
- **Impervious Suits:** Wear full overalls during pour or spray tasks.



HAND & FOOT BARRIERS:

- **Heavy-Duty Gloves:** Use thick, elbow-length chemical gloves.
- **Rubber Boots:** Wear chemical-impervious boots on grow floors.
- **Puncture Checks:** Inspect gloves for holes before opening chemicals.



Company Name: [EDIT HERE]

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CAUTION

CULTIVATION ZONE LIGHT EXPOSURE & OCULAR SAFETY PROTOCOLS

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WARNING HAZARD RISK

- **Intensive Light:** Personnel are officially notified that high-intensity, high-output agricultural grow lighting arrays (including LED, HPS, and specialized UV systems) are actively operated throughout this production zone.
- **Eye Hazard:** Continuous unprotected exposure to intense operational lighting poses an immediate risk of acute eye strain, macular fatigue, and permanent long-term vision or ocular damage.
- **UV-C Radiation Isolation:** Active deployment of high-output UV-C crop sanitation light arrays is strictly prohibited while technicians are present inside the grow block. Supervisors must enforce physical interlocks or timed software lockouts to ensure zero occupancy during sanitizing radiation sweeps.
- **Approved Eyewear:** Certified anti-glare, UV-protective, or spectrum-specific safety eyewear must be equipped by all personnel continuously while active inside illuminated grow blocks.
- **Exposure Limits:** Operations management must



MANDATORY PROTECTION:

CAUTION

GROW ROOM LIGHT EXPOSURE

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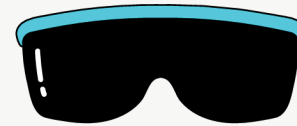
PART 1: Primary Hazards & Protective Mandates

WARNING HAZARD RISK:

- **Intensive Light:** High-output grow light arrays (LED, HPS, and specialized UV systems) are actively operated throughout this zone.
- **Eye Hazard:** Continuous unprotected exposure to intense light causes acute eye strain, macular fatigue, and permanent long-term ocular damage.
- **UV-C Isolation:** Operating high-output UV-C crop sanitation light arrays is strictly prohibited while technicians are inside the grow block.

MANDATORY PROTECTION:

- **Approved Eyewear:** Certified anti-glare, UV-protective, or spectrum-specific safety glasses must be worn continuously inside illuminated grow blocks.
- **Exposure Limits:** Management must enforce strict shift-rotation schedules to restrict cumulative time spent directly under active lighting systems.
- **Zero Direct View:** Personnel are strictly prohibited from looking directly into illuminated lamp arrays or reflective fixture modules at any time.



Company Name: [EDIT HERE]

Applicable Area: [EDIT HERE]

SOP Reference: [EDIT HERE]

CAUTION

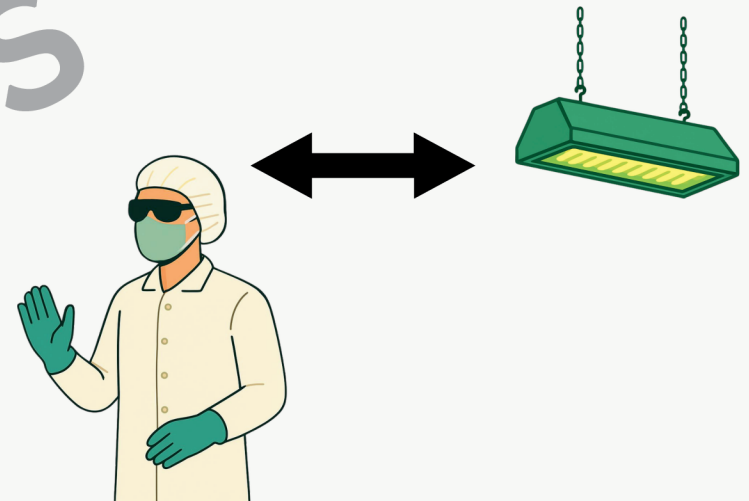
GROW ROOM LIGHT EXPOSURE

WHO GACP and EU/US FDA cGMP Guidelines

PART 2: Safe Facility Practices

SAFE FACILITY PRACTICES

- **Pre-Entry Check:** Workers must complete a full apparel and PPE verification sequence inside the gowning airlock before crossing the threshold into active cultivation rooms.
- **Ocular Ingress Transition:** Personnel must fully equip and secure their spectrum-specific protective sunglasses inside the gowning airlock area prior to triggering facility cleanroom door releases.
- **Distance Maintenance:** Personnel must maintain safe physical positioning and clearing distance from light ballasts, electrical tracking systems, and high-temperature fixtures.
- **Report Issues:** All facility staff are legally required to notify quality assurance and site management immediately if they experience any ocular discomfort or headaches.



Company Name: [EDIT HERE]

Applicable Area: [EDIT HERE]

SOP Reference: [EDIT HERE]