

Safe Storage and Disposal of Chemicals in Wineries and Vineyards

Protecting People, Environment, and Property Through Responsible Chemical Management

Introduction

Chemical use is an essential component of modern winemaking and vineyard management. From pesticides and fungicides to sanitizers and cleaning agents, these substances play a critical role in ensuring healthy vines and producing quality wines. However, improper storage or disposal of chemicals can pose significant risks to human health, the environment, and business operations. This bulletin provides practical guidelines for the safe storage and disposal of chemicals commonly used in wineries and vineyards, emphasizing best practices and regulatory compliance.

Chemicals Commonly Used in Wineries and Vineyards

- Pesticides (herbicides, insecticides, fungicides)
- Fertilizers (liquid and granular)
- Cleaning agents and sanitizers (chlorine, peracetic acid, caustic soda)
- Preservatives (sulfur dioxide)
- Laboratory chemicals (reagents, solvents)

Each of these chemicals can present hazards if not managed correctly, including toxicity, flammability, reactivity, and environmental contamination.

Safe Chemical Storage Practices

LOCATION OF CHEMICAL STORAGE

- Store chemicals in a dedicated, well-ventilated area away from winemaking, grape processing, and food handling zones.
- Ensure storage sites are secure, with restricted access to authorized personnel only.
- Position storage areas above flood levels and away from direct sunlight, heat sources, and ignition points.

TYPES OF CHEMICAL STORAGE

- Metal Cabinets: Ideal for flammable chemicals such as solvents. Cabinets should be fire-resistant, locked, and clearly labeled.

- Polyethylene Cabinets: Suitable for corrosive chemicals like acids and caustics. These cabinets resist chemical attack and leakage.
- Outdoor Chemical Storage Units: Weatherproof containers or sheds, equipped with secondary containment (such as spill pallets) to prevent leaks from contaminating soil or water.
- Segregated Shelving: Use separate shelves for incompatible chemicals (e.g., acids and bases, oxidizers and organics).

STORAGE BEST PRACTICES

- Label all containers with their contents, hazard warnings, and date received.
- Keep chemicals in original containers whenever possible. If repackaging is required, use containers made of compatible material and label them clearly.
- Install spill containment systems (secondary containment trays, berms, or bunding) under liquid storage.
- Maintain an up-to-date inventory of stored chemicals and Safety Data Sheets (SDS) for each substance.
- Rotate stock to use older chemicals first and minimize expired or degraded products.
- Store personal protective equipment (PPE) nearby for staff handling chemicals.
- Implement regular inspections to check for leaks, damaged containers, and proper labeling.

Safe Chemical Disposal Practices

GENERAL DISPOSAL GUIDELINES

- Never dispose of chemicals down drains, sewers, or onto the ground.
- Follow local, regional, and national regulations on chemical disposal and environmental protection.
- Maintain records of chemical disposal, including quantities, dates, and methods used.

TYPES OF CHEMICAL DISPOSAL

- Hazardous Waste Disposal: Engage licensed hazardous waste contractors for pesticides, solvents, acids, bases, and other regulated substances. Contractors provide documentation and ensure compliance.
- Triple Rinsing: Containers that formerly held pesticides can be triple-rinsed and recycled if allowed by local laws. Collect rinse water and dispose of as hazardous waste.
- Empty Container Management: Puncture and crush empty containers (if permitted), then recycle or dispose of in accordance with local regulations.
- Organic Waste: Some biodegradable chemicals and organic residues may be composted, provided they are non-toxic and permitted by law.
- Lab Chemicals: Small quantities of lab reagents must be disposed of through hazardous waste programs—never mixed with general refuse.

SPECIFIC DISPOSAL TIPS FOR WINERIES AND VINEYARDS

- Develop a written chemical disposal plan, including emergency procedures for accidental spills and exposures.
- Train staff in safe handling, storage, and disposal procedures.
- Participate in community hazardous waste collection events whenever possible.
- Work with suppliers to return unused chemicals, when possible.
- Ensure external disposal containers are weatherproof, locked, and clearly labeled.
- Monitor disposal sites for signs of environmental contamination.

Minimizing Chemical Risks

- Substitute less hazardous chemicals or alternative pest management methods when feasible.
- Order chemicals in quantities appropriate for immediate use to minimize storage needs.
- Regularly review and update chemical management policies.
- Display emergency contact information and spill response protocols in chemical storage areas.

Emergency Preparedness

- Equip chemical storage areas with spill kits, fire extinguishers, and eye wash stations.
- Develop and communicate a written emergency response plan for chemical spills, leaks, or exposures.
- Conduct regular safety drills and staff training sessions.

Conclusion

Proper storage and disposal of chemicals in wineries and vineyards are crucial for safeguarding employees, protecting local ecosystems, and maintaining regulatory compliance. By implementing secure storage solutions, following appropriate disposal methods, minimizing risk, and prioritizing safety education, wineries and vineyards can not only reduce losses but also demonstrate stewardship of their land and community. Responsible chemical management is not just a regulatory requirement—it is a commitment to producing high-quality wine in harmony with nature.

For More Information:



RISK SERVICES DEPARTMENT

Risk.Services@AmericanNational.com
518.431.5098

www.AmericanNational.com

The information contained in this handout has been obtained from sources believed to be reliable. The information is general in nature and may not apply to all circumstances. American National, its affiliates, agents and employees do not guarantee the accuracy or completeness of the information provided and assume no liability, expressed or implied, in connection therewith. Further, the information is not intended to constitute legal advice and should not be relied upon in lieu of consultation with an appropriate legal advisor.

American National is a group of companies writing a broad array of insurance products and services. Products and services may not be available in all states. Terms, conditions and eligibility requirements will apply. Property and casualty products may be issued by American National Property And Casualty Company, Springfield, Missouri; United Farm Family Insurance Company, Glenmont, New York or Argonaut Insurance Company, Chicago, Illinois. Not all companies are licensed in all states. Each company has financial responsibility only for the products and services it issues. For information about the companies, visit <https://www.americannational.com/>

25-037-139521-0925