

**GUIDELINES GOVERNING CONSTRUCTION
AND OPERATION OF
WINERY FACILITIES IN KANSAS**
Kansas Department of Agriculture

I. BUILDING AND GROUNDS

A. Suitable plans for new construction or remodeling of winery facilities and the installation of equipment must be submitted to the regulatory agency and approved before starting construction. They do not need to be blue prints but a sketch close to scale is required.

B. Location and construction of winery buildings

1. Should be accessible to all-weather drive or road. Facility shall be planned to provide easy access for winery operations and the public. Roads, yards and parking lots shall be maintained so that they do not constitute a source of contamination in areas where food is exposed or an attractant, breeding place or harborage for pests.

2. Buildings and structures shall be suitable in size, construction and design to allow for ease of maintenance and sanitary operations.

a. Sufficient space shall be provided for placement of equipment and storage of materials

b. Operations which are likely to contaminate food, food-contact surfaces or food packaging materials shall be separated by any effective means such as location, partition or enclosed systems.

3. The surrounding terrain shall slope away from the winery facility to prevent water and other materials from flowing into the facility. Floors should be constructed of reinforced concrete or other impervious material. Floors must be properly sloped to approved trapped drains to provide complete drainage. It is recommended that a minimum slope to drain of 1/8" per foot is used. Floors should be coved or rounded to wall.

4. Floor drains must be of adequate size and design to handle the flow or output of any incoming plumbing. Drains must be installed with traps meeting local plumbing code to prevent the backup of odors into the winery. Access to drains shall not be obstructed by the placing of other equipment. Wash vats and hand washing lavatories shall be trapped and plumbed to drains.

5. Proper precautions shall be taken to protect food in outdoor bulk fermentation vessels by any effective means, including:

a. Using protective coverings

- b. Controlling areas over and around the vessels to eliminate harborages for pests
 - c. Regularly checking for pests and pest infestation
 - d. Skimming the fermentation vessels as necessary
6. Walls and ceilings shall be constructed of materials which will allow them to be kept clean and in good repair. Walls and ceilings should be constructed of light colored, smooth, impervious material.
- a. Food, food-contact surfaces and food packaging materials shall be protected from drip, condensation or foreign materials from overhead fixtures, ducts and pipes.
 - b. Adequate lighting in all areas shall be provided. It is recommended that a minimum of 20 foot candles (20 lumens per sq. ft.) in working areas is provided. Light bulbs and fixtures shall be protected against food contamination in case of glass breakage.
 - c. Adequate ventilation shall be provided. Ventilation ducts or fans shall be located in such a way so they do not contaminate exposed food, food-contact surfaces and food packaging materials.
 - d. All outside openings shall be screened or protected to prevent the entry of pests.

II. EQUIPMENT AND UTENSILS

- A. All plant equipment and utensils shall be designed and constructed of materials as to be easily cleanable.
- 1. Food-contact surfaces shall be corrosion-resistant and shall be made of nontoxic materials. Galvanized metal surfaces and lead-based painted surfaces are not allowed.
 - 2. Seams on food-contact surfaces shall be smoothly bonded and maintained to minimize accumulation of food particles, filth and organic material. Pay special attention to plastic and PVC piping, fittings and valves.
 - 3. Equipment that is in the food manufacturing area and that does not come into contact with food shall be so constructed and stored so that it can be kept clean.
 - 4. Compressed air or other gases which may be introduced into food or used on food or food-contact surfaces shall be filtered or treated in such a way that the food does not become contaminated.
 - 5. Instruments and controls used for measuring, regulating, or recording temperatures, pH, acidity, water activity or other conditions that control or prevent the growth of undesirable microorganisms in the wine shall be accurate and adequately maintained.

III. SANITARY FACILITIES AND CONTROLS

A. Each winery shall be equipped with adequate sanitary facilities including water supply, plumbing, toilet / sewage disposal, and hand-washing facilities.

1. The water supply shall be of safe, sanitary quality and adequate quantity to complete necessary winery operations.
2. Hot and cold running water under pressure shall be supplied to all areas where required for the winemaking process, cleaning of equipment and for employee sanitary facilities.
3. The sewage system shall be constructed and operated in accordance with Kansas Department of Health and Environment and applicable local regulations.
4. Each winery shall have readily accessible toilet facilities complete with hand washing facilities and vent. If not separated by at least one room from the manufacturing area, the toilet shall have a self closing door. It is recommended that restrooms do not open directly into areas where wine is processed or stored.
5. Each winery shall be equipped with a hand washing facility, provided with hot and cold water under pressure, conveniently located to the wine production areas.
6. Facilities must comply with the National Plumbing Code Standards.

IV. SANITARY OPERATIONS

A. Buildings, fixtures and other physical facilities of the winery shall be maintained in a sanitary condition.

B. Cleaning compounds and sanitizing agents shall be safe for use

1. Toxic cleaning compounds, sanitizing agents and pesticide chemicals shall be identified and stored in a manner that protects against contamination of the food, food-contact surfaces or food packaging materials.

C. Effective measures shall be taken to exclude pests, pets and other domestic animals from the processing areas and to protect against contamination. The use of food processing facility approved insecticides, rodenticides and pesticides is permitted only under precautions and restrictions that will protect against the contamination of the food.

D. All food contact surfaces, including utensils, shall be cleaned as frequently as necessary to protect against contamination of food and shall be stored in a clean condition.

1. Food contact surfaces shall be cleaned and sanitized before use and after any interruption during which the surface may have become contaminated.
2. Non-food contact surfaces of equipment used in the winery should be cleaned as frequently as necessary to protect against contamination of the food.

E. Single-service articles intended for one-time use such as filters should be stored, handled and used in a manner that protects against contamination

F. Sanitizing agents shall be adequate and safe under conditions of use. Any procedure is acceptable for cleaning and sanitizing if it is established that the procedure will provide adequate cleaning and sanitizing treatment.

V. PROCESSES AND CONTROLS

A. All operations in the winery shall be conducted in accordance with adequate sanitation principles.

1. Quality control practices shall be employed to ensure that food is suitable for human consumption.
2. Overall sanitation of the winery shall be under the supervision of one or more individuals assigned responsibility for this function.
3. The winery should have bio-security measures in place and should follow a written HACCP (Hazard Analysis Critical Control Point) plan.

B. Raw materials shall be held in bulk containers designed and constructed so as to protect against contamination.

1. Effective measures shall be taken to protect against the inclusion of metal or other extraneous material in the raw food.
2. Raw materials that become adulterated shall be disposed of.
3. The crushing / pressing operation must be done so as to protect the juice against contamination. Compliance with this requirement may be accomplished by providing adequate physical protection of the grapes from contaminants that may drip, drain, or be drawn into the food. This includes adequate cleaning and sanitizing of all food contact surfaces.

C. All processes must be conducted under such conditions and controls as are necessary to minimize the potential for the growth of unwanted microorganisms, or for the contamination of the food.

1. Holding, fermentation, “pump-over” or “punching down” operations must be conducted in such a way as to provide adequate physical protection of the wine.

D. Filling, packaging and bottling operations shall be performed in such a way that the wine is protected against contamination.

1. Bottles and closures used must be safe and suitable for packaging human food.
2. Adequate cleaning and sanitizing of all containers shall be done immediately prior to bottling.
3. Bottles and closures must be stored and handled in a sanitary manner.
4. Mechanical bottling, including capping / corking, of the wine is recommended to minimize physical contamination and airborne contamination.

VI. PERSONNEL

A. Winery management shall take all reasonable measures and precautions to ensure persons working in the winery conform to hygienic requirements.

1. No persons affected with any disease capable of being transmitted to others through the contamination of food shall work at the winery in any capacity which brings them into direct contact with the food or food-contact surfaces.
2. Persons with sores, infections, etc are restricted from handling food products.
3. All persons shall wear clean outer garments, use adequate hair restraints and remove excess jewelry.
4. Hands shall be thoroughly washed before beginning any winery function and as often as may be required to remove soil and contamination.
5. Employees shall not eat, drink or use tobacco products while working in processing areas.
6. Winery workers should receive appropriate training in proper food handling techniques and food-protection principles and should be informed of the danger of poor personal hygiene and unsanitary practices.

VII. STORAGE AND TRANSPORTATION PRACTICES

A. Storage and transportation of finished wine products shall be under conditions that will protect it against physical, chemical and microbial contamination.