



Helping Clients Sanitize Organically!

Executive Summary:

Winery Ozone Application Recommendations, Benefits, and Savings*

Ozone Sanitation Applications

In order to discuss ozone winery sanitation applications and methods it is necessary to have a clear picture of what winery sanitation is intended to accomplish. The purpose of sanitation in wineries is the continual elimination and control of spoilage organisms which have an adverse impact on the wine. Sanitation is a continuous process which is not single faceted but rather covers all aspects of the winery operation.

Spoilage organisms are found throughout the winery and can move by a variety of mechanisms from one part of the winery to another. Their control requires attention to their location and movement mechanisms. As an example, a good barrel sanitation protocol without a tank and bottling line sanitation protocol will probably not solve the problem. It would be like washing your pants and forgetting about your socks. I often have wineries call and say they wish to purchase an ozone system for their barrels. I then try to explain to them that to be effective barrel sanitation must go hand in hand with total winery sanitation protocols.

In general to be effective winery sanitation protocols should consider the following:

- 1) Wine Contact Surfaces – Any surface which comes into direct contact with the product (i.e. barrels, tanks, bottling lines, transfer lines and hoses, pumps, appurtenances (valves, barrel bungs, fittings, etc.)).
- 2) General Facility Sanitation – All surfaces in the facility which can harbor microbes (floors, walls, drains, etc.).
- 3) Atmospheric Sanitation – The elimination and control of airborne spoilage organisms, mold spores, odors and fruit flies.

The following characteristics of ozone make it an ideal single source sanitizer for above winery sanitation protocols:

- 1) Effective at killing a broad spectrum of microbes and spoilage organisms.
- 2) Easily used to sanitize a wide variety of locations, applications and processes.
- 3) Environmentally friendly.
- 4) Safe.
- 5) Reduces water usage.
- 6) Energy efficient.
- 7) Have no negative impact on facilities or the final product.

*Please contact us for a copy of the entire Winery Ozone Application Recommendations, Benefits, and Savings Paper

The benefits of ozone as a single source winery sanitizer include:

- 1) Spoilage organism control.
- 2) Improved product quality.
- 3) Mold and mildew control.
- 4) Reduced water usage.
- 5) Reduced labor, chemical and energy costs.
- 6) Extended barrel use.
- 7) Improved employee safety.

The recommended ozone sanitation applications for wineries, discussed below, encompass the entire sanitation needs of a winery.

Summary of Applications

- 1) **Barrel Sanitation Program.** Ozone when utilized with the correct protocols effectively eliminates Brettanomyces and other spoilage organisms from barrels. McClain has both healthy and problem barrel sanitation protocols available. The implementation of the McClain Barrel Maintenance System will provide additional water and time savings (approximately 50%).
- 2) **Barrel Storage.** McClain protocols for using ozone gas for barrel storage replacing sulfur dioxide (SO₂) are well established and available. Barrel storage with ozone results in chemical savings, improved product quality, improved employee safety and does not require employee pesticide certification.
- 3) **Wine Contact Surface Sanitation.** Ozone is a single source sanitizer for all wine contact surfaces (i.e. tanks, hoses, transfer lines, barrels, pumps, barrel bungs, valves, etc.).
- 4) **General Facility Sanitation.** (floors, walls, drains, etc.)
- 5) **Facility Gassing.** Winery facilities including barrel storage rooms can be effectively treated for mold, mildew, airborne spoilage organisms, fruit flies (spoilage vectors) and odor control using ozone gas.

Application protocols for utilizing McClain systems are available.

The size of McClain Sanitation System required depends on the size of the winery and the intended applications. The Destroyer Series is designed and for use in small to medium sized facilities while the Bugbuster Series is designed for medium to large facilities.

Please feel free to contact me for assistance in sizing a McClain System for your facility and applications.

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