

# SMOKE TAIN T REMOVAL



## OVERVIEW

The rampant wildfires that plagued California's north and central coasts in 2008 led to a significant amount of smoke-tainted wines, full of campfire aromas and bitter flavors. It wasn't long after that the Winetech lab developed a solution for the smoke taint. Elevated levels of 4-Methylguaiacol (4MG) and Guaiacol (G) proved to be effectively removed using reverse osmosis (RO) technology, along with absorbent media.

## PROCESS

Similar to the use of RO in VA removal, Winetech's Smoke Taint Removal System uses loose RO to separate 4MG/G into the permeate stream. This permeate stream is then treated separately through ion-exchange resin columns, removing smoke taint without damaging pigmented retentate, which is responsible for wines' complex characteristics. After treatment, the permeate is blended back into the retentate.

## EQUIPMENT

Winetech's system consists of a combination of loose RO membranes and absorbent media.

**QUALITY CONTROL:** Pre- and post-treatment lab analysis and sensory evaluation.



<b>EQUIPMENT</b>	<ul style="list-style-type: none"> <li>•Winetech Loose R.O. System with Absorbent Media</li> <li>•Membranes: FDA approved, thin-film tangential membrane</li> <li>•Absorbent Media: FDA approved, odorless and flavorless</li> </ul>
<b>APPLICATIONS</b>	<ul style="list-style-type: none"> <li>•Removal of Smoke Taint off-flavors (4MG-G) from wine</li> </ul>
<b>COMPLIANCE</b>	<ul style="list-style-type: none"> <li>•All components, materials and chemicals are FDA approved</li> <li>•TTB compliant</li> </ul>
<b>PROCESS</b>	<ul style="list-style-type: none"> <li>•Throughput: 350 - 650 gallons/hour</li> <li>•Wine temperature: 55°- 65° F (13°-18° C)</li> <li>•Max working pressure: 740 PSI (50 bar)</li> <li>•Average wine loss: 0.5% - 3% (small lots)</li> <li>•Cleaning agent: sodium / potassium hydroxide</li> <li>•All equipment is sanitized after each use</li> </ul>
<b>SERVICE REQUIREMENTS</b>	<ul style="list-style-type: none"> <li>•<b>Analyses: Sensory evaluation</b></li> <li>•<b>Power:</b> Dedicated receptacle within 100 feet <ul style="list-style-type: none"> <li>•220 Volts tri-phase 30 Amp</li> <li>•480 Volts tri-phase 15 Amp</li> </ul> </li> <li>•<b>Receptacle:</b> Hubbell style three poles + ground 30A 480V / 60A 480V / 60A 240V NO HARD WIRING will be done by our Filter Technicians. We can sell the receptacle to be installed by your contractor. We will not perform the service without the necessary receptacle in place</li> <li>•<b>Water:</b> Within 70 feet with 3/4" garden hose fitting</li> <li>•<b>Tanks:</b> Wine tank within 70' with Tri Clover fitting (above ground level)</li> <li>•<b>Hoses:</b> 1 ½" or 2", sanitized, enough to reach the tank</li> </ul>
<b>WINE REQUIREMENTS</b>	<ul style="list-style-type: none"> <li>•<b>Wine:</b> Racked, blended, in tank</li> <li>•<b>Lot size:</b> Minimum 500 gallons</li> <li>•<b>Wine temperature:</b> Minimum 55° - 65° F (13° - 18°C)</li> <li>•<b>Brix:</b> Max 10°</li> <li>•<b>Note:</b> No CO2, clarifying products, bentonite, seeds or pomace</li> <li>•<b>Turbidity:</b> Less than 200 NTU</li> </ul> <p><b>CAUTION:</b> Maintain free SO2 level between 20 - 30 mg/l before and after treatment</p> <p><b>Should these requirements not be met at the time of service, Winetech reserves the right to reschedule, revise pricing and/or cancel the service</b></p>