ABSTRACT

EFFICACY OF GASEOUS AND AQUEOUS OZONE IN TREATING OAK USED IN WINEMAKING FOR *BRETTANOMYCES*

The efficacy of ozone as a sanitizer to eliminate *Brettanomyces bruxellensis* found in barrels was evaluated by treating colonized oak cubes with gaseous and aqueous ozone treatments in comparison with hot water. Infected oak cubes were treated with gaseous ozone at 1300 and 600 μL/L for 2 hr, 1 hr, 30 min, and 15 min, ozone water at 1, 3 and 5 mg/L for 3 min and hot water at 82^{o}C for 20min. Ozonated water at 1 mg/L, hot water at 68°C and water at 20°C were used to treat core oak samples for a period of 2.5, 5 and 10 min in a barrel. Ozone gas, hot water and aqueous ozone in a barrel reduced the *B. bruxellensis* population significantly ($P<0.05$), unlike ozone water in an opened vessel. We concluded that gaseous ozone was the most effective treatment and could be used in conjunction with hot water.

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May 2004