

**Title** Use of ozone to control postharvest grey mold of table grapes

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### **Abstract**

The main objective of postharvest disease control of table grapes is to preserve quality (appearance, texture, flavour, nutritive value and safety) in the face of attacks by phytopathogenic microorganisms. To reduce table grape losses during harvest and commercialization, ozone, classified as a safe substance “GRAS” by the U.S. Food and Drug Administration, is used. This work reports the results of a trial of ozonated water treatment on table grapes in cold and in ambient temperature storage. The trial was carried out in November in a covered vineyard of table grape ‘Italia’. Bunches were treated with ozone or the bio-control agent *Aphanocladium album* isolate Mx-95, or sulphur dioxide. Bunches just after harvest were immersed in ozonated water at a concentration of 4 ppm for 3 minutes. A suspension of Mx-95 was applied with a nebulizer in the field, at a concentration of  $1 \times 10^7$  CFU/ml three days before harvest. Sulphur dioxide was applied as a film upon the bunches in the package. The incidence of grape rot was assessed after various days of cold and/or ambient temperature storage. Treatments with ozonated water and Mx-95 gave satisfactory disease control. Sulphur dioxide gave the best results in rot control. We acknowledge the technical cooperation of “ECO.AGRO.SERVICE”, chemical and environment analysis laboratory, Adelfia (Bari), Italy.