**Title** Effects of postharvest ethylene treatment on minimal processing suitability of 'Kyoho' grape

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**Abstract**

Effects of exogenous ethylene treatment were investigated to facilitate minimal processing of 'Kyoho' grape. Grapes were harvested at commercial maturity, exposed to 10 and 100 μL • $L^{-1}$, and stored for 4 months at 0℃ before processing. After storage, grapes were processed into individual berry or segmented products and put on the shelf for 7 days at 7℃. Based on the incidence of decay and changes in flesh firmness, storage potential of grapes in the cluster form as processing material was in the range of 2 months regardless of the postharvest ethylene treatment. Postharvest ethylene treatment significantly stimulated berry shattering even after 3 days of induction. Weight loss during storage was higher in the control than in the ethylene-treated grapes. No critical deterioration of instrumental and sensory quality by the ethylene treatments was observed during 7-day shelf life. Taste and appearance were rather maintained better in berry products when using naturally shattered berries induced by the ethylene treatments. Overall results indicated that postharvest treatment of 10 μL • $L^{-1}$ ethylene facilitated minimal processing of berry products without affecting storability of raw materials and shelf life of the product.