

热处理对轻度加工葡萄呼吸强度和内源激素的影响 Effects of Heat Treatment on Respiration Intensity and Endogenous Hormone of Lightly Processed Table Grapes

寇莉萍 刘兴华 丁武 卜歆

西北农林科技大学

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摘要: 为探索热处理对轻度加工葡萄衰老软化机制及贮藏保鲜效果的影响,以红地球葡萄为试验材料,研究了热空气55℃、5min和热水45℃、8min处理对其衰老过程中呼吸强度和内源激素含量的影响。结果表明,热处理显著地抑制了轻度加工葡萄的呼吸强度;热处理葡萄中IAA(生长素)和GA3(赤霉素)的含量与果实的腐烂率呈显著的线性负相关性( $P < 0.05$ ),其相关系数 $r$ 分别为0.9035和0.8416;轻度加工葡萄中ABA(脱落酸)含量变化呈抛物线形变化,热处理可以推迟ABA高峰期并降低峰值;热处理对诱导ZR(细胞分裂素)的产生效果不明显,各处理葡萄中ZR的含量变化无明显规律。 To explore the effect of pre storage mild heat treatment on mechanism of senescence and softening and storage quality of minimally-processed grape, lightly processed Red Globe grape were treated at either 45℃ for 8min or 55℃ for 5min before stored. The respiration and endogenous hormone of the treated table grapes were investigated. Results indicated that heat treatment had significant effects on the respiration rate of grapes during storage as follows. Contents of IAA and GA3 were negatively correlated with decay rate of lightly processed grape, and the correlation coefficients were 0.9035 and 0.8416, respectively. The ABA content during the storage of the grapes changes in parabolic shape, developed from lower to higher and then to lower. Heat treatment can delay the appearance of peak and decline the peak value. ZR content was not significantly affected by heat treatment, and didn't present change rule during the lightly processed storage.

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