POSTHARVEST QUALITY OF 'VALENCIA' ORANGES (Citrus sinensis (L.) Osbeck) SIMULATING HARVEST HANDLING IMPACT

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The Brazilian citrus industry has significant economic-social relevancy. Harvest is a major challenge since it is predominating manual without using any other alternatives. Previous studies examining different types of harvest (manual, detachment, harvest aided and mechanical) for impact magnitude using an instrumented sphere (Techmark, Inc, USA) indicate acceleration values between 500 and 2000 G, depending on the harvest type. Therefore, this research aimed to evaluate laboratory impacts with fruit quality. 'Valencia' oranges were submitted to the follow treatments: control fruits (without impact) and fruits submitted to impact of 2000 and 1500G G. Impact was performed in laboratory, dropping fruits from a vacuum suction device. Oranges were stored for 5 days at 24 ° C and evaluated for soluble solids, titratable acidity, ratio, ascorbic acid and weight loss. Fruits submitted to treatments of 1500G and 2000G did not show statistical differences for soluble solids and titratable acidity, but demonstrated reduction of 3% and 6.4% respectively, compared to control. Ratio rate for 1500G and 2000G treatments had an increase of 3.6%. The ascorbic acid of control and treatment 1500G did not differ statistically, but fruits submitted to impact of 2000G declined by 5.2%. Fresh weight loss was 0.6%, 0.8%, 0.9% for control, treatments 1500G and 2000G, respectively. Fruits submitted to intensive impact showed increase on postharvest quality loss, indicating that changes on the harvest system can generate improvements in this process.