

Title Study of physical–chemical and sensorial properties of irradiated Tommy Atkins mangoes (*Mangifera indica* L.) in an international consignment

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Abstract

Tommy Atkins mangoes from Brazil were sent to Canada after being submitted to a thermal treatment (46.1 °C, 110 min – control) and to a gamma irradiation treatment (doses 0.4 and 1.0 kGy). The fruits were stored at 11 °C during 10 days until the international transportation and kept at an environmental condition (22 °C) during 12 days, where their physical–chemical and sensorial properties were evaluated. Analysis of visual parameters showed that irradiation treatment influenced the maturity index. Mass loss was around 5% for all fruits, from the three treatments, and incidence of end rot was lower for irradiated fruits. Physico-chemical analysis presented some significant differences and irradiated mangoes at 1.0 kGy had lower values than control ones ($p \leq 0.05$) for texture for each day of analysis. Sensory evaluation demonstrated that panelists perceived few differences among treatments.