

Genotype influence on shelf life behavior of minimal processing loquat (*Eriobotrya japonica* Lindl.) fruit, cultivated in organic system

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Loquat (*Eriobotrya japonica* Lindl.) cultivation in Southern Italy includes different cultivars, characterized by a persistent aroma and an excellent flavor. These sensory traits are highly appreciated by consumers, together with the absence of external defects on the peel because of fungal black spots (*Fusicladium eriobotryae*). In order to increase the commercialization of ready-to-eat loquat fruit, the proper maturity index for peeling and minimally processing should be evaluated and characterized. The aim of this study was to investigate the effect of genotype on the shelf life and quality of minimal processed loquat fruit harvested at commercial maturity stage (10% green ground-color, 70 yellow and 20% orange color). The loquat fruit were peeled and stored at 5 °C for 3, 5, 7 and 10 days. Peeled fruit color (ΔE), appearance, crunchiness, flavor score, phenols total, lutein, β -carotene and ascorbic acid content were measured and sensory profiles were evaluated, together with CO₂ and O₂ content in the package. The minimally processed loquat fruit had the highest palatability and flesh color persistency when harvested at commercial ripening stage rather than at full maturity. Fruit of late ripening genotypes had a very low rate of pulp oxidation and quality decay, while fruit of the early ripening appeared not suitable for fresh-cut. Genotype had a great influence on weight loss, low β carotene content, fruit respiration, ascorbic acid and total phenols content all along the shelf life. A high correlation occurred between visual appearance, flavor and crunchiness score.

Keywords: *Eriobotrya japonica*, microbial spoilage, fresh-cut, flavor score.