

## Preservation and Quality Evaluation of *Elaeocarpus serratus* (Ceylon Olive) using Natural Preservatives

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*Elaeocarpus serratus* (Ceylon olive/ *Veralu*) is one of the underutilized fruit tree species indigenous to Sri Lanka. The edible flesh of fully matured or ripen fruits is rich in minerals and vitamin C. The postharvest losses during the season are substantially higher due to shorter shelf life of ripe fruits. The objective was to develop a value-added, preserved product using natural preservatives and Ceylon olives for the offseason. Based on the preliminary trials, the blanching of fruits in a salt solution (10% w/v) was the best pretreatment. Pretreated fruits were filled into sterile bottles with the filling medium of the hot water extracted filtrate (100 ml) of spice mixture (12-15g of red onion, garlic, white pepper, clove, mustard and curry leaves) with salt (10 g) and vinegar (20 mL). Then bottle exhausting and sealing were done. Preserved fruits and filling medium were subjected to chemical and microbiological tests just after bottling and during the storage, at ambient temperature ( $28 \pm 2^\circ\text{C}$ ) of 14 weeks. Color, taste, texture and overall acceptability were evaluated by 34 untrained panelists with the hedonic scale (1: extremely dislike, 5: extremely like). Titrable acidity, pH, total soluble solids and Total Plate Count of the filling medium of the blanched fruits were recorded as  $1.7 \pm 0.1\%$ ,  $2.7 \pm 0.1$ ,  $12.9 \pm 0.1\%$ ,  $344 \pm 10 \text{ cfu mL}^{-1}$  respectively, at 14<sup>th</sup> week storage. However, yeast & molds were not detected in the product containing blanched fruits, during the storage. All the tested sensory properties of both blanched and non-blanched fruits were evaluated above neither like nor dislike by the sensory panel. Preserved fruits in combination with blanching pretreatment were microbiologically safe for 14 weeks while the shelf life of the non-blanched fruits was 4 weeks. Therefore, natural preservatives can be used to preserve Ceylon olives up to 14 weeks with acceptable sensory properties and quality parameters in comparison with allied fruit product standards.

**Keywords:** Ceylon olive, *Elaeocarpus serratus*, Natural preservatives, Underutilized