Effect of Gammalu *(Pterocarpus marsupium)* Latex Coating on Internal and Sensory Qualities of Chicken Eggs Stored at Room Temperature

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Coating of eggs is one of the methods used to preserve egg quality and extend the shelf-life. Objective of this research was to check the suitability of *Gammalu (Pterocarpus marsupium)* latex as a coating material on eggs to control egg quality and sensory attributes over an extended time duration. Total of 369 eggs from 38 weeks old ISA-Shaver Brown were purchased from a government livestock farm. Eggs were individually weighed and assigned as completely randomized design to five different coating treatments as three *Gammalu* latex solutions, mineral oil (positive control) and uncoated (negative control) and stored at room temperature(27±2°C). The weight loss, internal quality parameters such as Haugh unit, yolk index, albumen and yolk pH values and sensory qualities of eggs were determined. Microbiological analysis was done to identify *Salmonella* in the internal contents of eggs. Only mineral oil coated eggs had significantly lower weight losses during the storage period ($p<0.05$). No significant differences in all internal quality parameters evaluated among non-coated and *Gammalu* latex coated eggs were observed ($p>0.05$). Haugh unit and yolk index decreased whereas weight loss and albumen and yolk pH values increased during the storage. Non-coated eggs changed from grade AA to C within 3 weeks. However, *Gammalu* latex maintained B grade up to 4 weeks and mineral oil maintained B grade during 6 weeks of storage periods. No significant difference in overall acceptability of hard boiled eggs after 4 weeks was observed. All coated eggs were negative for *Salmonella* indicating that eggs were microbiologically safe throughout the storage. This study demonstratedthat *Gammalu* latex coatings cannot preserve the internal quality of eggs and extend the shelf life of eggs compared to mineral oils but it has the potential for shelf-life extension for several weeks compared with non-coated eggs.

Keywords: *Gammalu,* Internal quality, Sensory, Chicken egg, Shelf-life

Acknowledgement: *This research was supported by the International Foundation for Science (IFS) under grant EZ5559-1.*