**Effect of Light Colour Combinations Generated from Light Emitting Diodes (LED) on Post-Harvest Storage Qualities of Ambul Banana (*Musa spp*)**

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Banana (*Musa spp*) is grown in more than 120 countries worldwide. Banana production has been ranked second in world fruit production. Post-harvest losses of bananas are relatively high (20-30 %) due to climacteric and perishable nature of the fruit. Nowadays, the use of artificial fruit ripening agents has become prevalent mostly due to commercial purposes. On the other hand, lots of health problems have occurred due to artificial ripening agents. Therefore, this study was conducted to investigate the effect of light colour combinations generated from LEDs on the post-harvest qualities of mature green Ambul bananas during post-harvest storage. Different colour combinations of LEDs were used to evaluate fresh weight loss, peel colour, pH, Total Soluble Solid, Ascorbic acid, *in vitro* microbial growth and sensory evaluation. Mature green bananas were stored under blue and yellow LED colour combination, blue and red LED colour combination, white colour and dark condition for 8 days. In combination treatments, one light was on from 8.00am to 12.00 noon and another light was on 12.00 noon to 4.00pm. Night time no light was provided. The experiment was conducted in Completely Randomized Design with three replicates. Mature green Ambul banana ripening can be accelerated by colour combination treatments when compared with dark conditions because faster yellowing, high fresh weight loss %, increased Total Soluble Solid content, lower pH values were recorded. Colour combination treatments can be used to improve nutritional qualities of stored ambul banana (Ascorbic Acid). The *in vitro* microbial growth on stored bananas can be suppressed. Blue and Yellow colour combination showed the highest preference for peel colour, aroma and texture in mouth and Blue and Red colour combination showed the highest preference for taste and appearance. There was a positive effect of light colour combinations generated from LEDs on the post-harvest qualities of mature green Ambul bananas during post-harvest storage.

**Keywords:** *colour combination treatments, light emitting diodes, post-harvest quality.*