EFFECT OF RIPENING METHODS ON PHYSICO-CHEMICAL PROPERTIES OF "KOLIKUTTU" BANANA STORED UNDER MODIFIED ATMOSPHERE FOR DIFFERENT PERIODS.

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In South East Asia banana is the premier fruit. Of the varieties available "kolikuttu" banana is popular due to its pleasing aroma and taste. Storage under modified atmosphere (MA) with ethylene absorbers (EA) has been proven to extend the green life of "kolikuttu" banana. In a study of natural ripening of MA stored banana, the ripening was found to be uneven with a poor peel color development. Artificial ripening with calcium carbide was able to overcome this problem. Consumer appeal for any fruit depends on its appearance, aroma and taste. Carbohydrates, especially the free sugars substantially contribute to taste and the breakdown of starch into sugars is the most significant chemical change during banana ripening. Therefore, a comparative study of physico-chemical properties of MA stored banana was carried out. Three sets (twelve packets in a set) of individual hands containing 12 fingers were enclosed in LDPE bags -(A), with wrapped EA in each bag- (B), with unwrapped EA in each bag-(C) respectively. Bags were opened on 10^{th}, 14^{th}, 17^{th} and 20^{th} day storage and subjected to three ripening methods, natural (N), ethral (E) and calcium carbide (C). Weight loss of bananas after ripening, pH, peel color, firmness, sucrose, glucose and fructose contents were measured.

Peel color and firmness did not show a significant difference with respect to any of the treatments during the 20day period. Sugar levels, pH and weight loss have significant effects ($P<0.05$) on the storage period but not on the packaging type and ripening method. The highest fructose (1.86%), glucose (1.34%) and lowest sucrose (6.16%) were obtained for 14^{th} day samples. pH of 10^{th} day was the lowest (4.5) and the highest weight loss (26.7%) was observed on the 20^{th} day.