Moringa oleifera is the most widely cultivated species of the genus moringa, which is the only genus in the family Moringaceae. Moringa contains high protein, vitamins, minerals and carbohydrate content, nutrition for both human and livestock. This valuable crop has a very short shelf life (1 to 3 days at room temperature) and also loss in nutritional quality due to poor postharvest handling and different means of food preparation influence the nutritional and functional qualities of moringa. Due to the lack of proper post-harvest management system, the bulk quantity of drumsticks get damaged during the process of handling, transportation, and marketing. The need for preservation of drumsticks are essential due to its medicinal and therapeutic properties so, edible coating was considered as a cheaper alternative to cope with this problem. Any type of material used for coating various food to extend shelf life of the product that may be eaten together with food or without further removal is considered an edible film or coating. Gum arabic was used as an edible coating. It is a mixture of glycoprotein and polysaccharides.

Freshly harvested drumsticks were sorted in uniform size then washed with distilled water and dried at room condition. Then, they were treated with three different chemical treatment i.e. NaCl 10%, CaCl₂ 1% and KMS 0.5% concentration. Average initial moisture content was determined by hot air oven method. Different physical properties such as weight, length and diameter were measured. A 10, 15 and 20% gum arabic solution were prepared by dissolving 10, 15 and 20 g gum arabic powder in 100 ml distilled water. The coating solution was applied by dipping process. Drumsticks were dipped in different concentrated gum arabic solution. Once, coating solution applied uniformly on the whole surface of drumsticks, they were drained for two minutes followed by dry under room condition for overnight. After drying, the pods were stored in room temperature at 25±5°C, 45-50% RH and in refrigerator at 8±2°C, 80-85% RH. The observations were recorded before treatment (0 day) and after 10 days intervals till the pod becomes non marketable.

During storage, after 6 days slight fungus was appeared on drumsticks treatments which were stored at room temperature, and after 10 days the surface of pods were fully covered by fungus. So the said treatment was discarded after 10 days of storage. Maximum moisture content (19.50%) was found in treatment T₂ C₃ i.e., CaCl₂ 1% + coating 20% at the end of 30 day of storage. The average value of weight, length and diameter of drumstick
was measured 56.95 g, 48.48 cm and 11.32 mm respectively. Maximum firmness (5.85 kgf), chlorophyll (0.14 mg/g), ascorbic acid content (78.94 mg/100g), protein content (2.13 g/100g), carbohydrate content (1.86g/100g), ash content (0.53%) were found for treatment $T_2C_3$ i.e., CaCl$_2$ 1% + coating 20% at the end of 30 days of storage.

Minimum physiological loss in weight (74.41%), fibre content (33.208 g/100g), total soluble solid content (9º Brix), pH (5.11) was found in treatment $T_2C_3$ i.e., CaCl$_2$ 1% + coating 20% at the end of 30 days of storage. From different chemical treatment $T_2C_3$ i.e., CaCl$_2$ 1% and 20% and gum arabic coating was found best amongst all the treatment combination with a storage temperature 8 ± 2 °C and 80 – 85 % RH which retain moisture, ascorbic acid, firmness, protein, crude fibre, chlorophyll and TSS to more extent as compared to other treatment up to 30 days of storage of drumsticks.