EVALUATION OF QUALITY PARAMETERS OF “REVIELLE” BLUE BERRY MINIMALLY PROCESSED (MP)

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Blueberry fruits contain high levels of micronutrients and phytochemical compounds. The dietary intake has a positive and impact on human health, performance, and disease. The MP fruits are attractive to the consumers for supporting the nutritional values and ready to use.

The objective of this study was to evaluate the effect of MP on the physical and chemical characteristics in “Reveille” berries.

Completely Randomized Factorial Designs was used. Two factor were studied; treatment (MP and E: Exportation) and storage time (initial and each 7 days for 6 weeks); with three replicates (used 42 blueberries in export storage chambers, weighed on average 127.6±7.34g). MP: Blueberries of each chambers were immersed in 100ppm chlorine solution (made with distilled water) for 2 minutes, followed by two distilled water rinse (total washing volume 1.5L), drained and packed in PET trays with a lid (diameter=8 cm). The full chambers were store in the refrigerator at 2º C.

All data were subjected to analysis of variance (ANOVA, α=0.05). There were significant differences for the following variables: a) interaction: weight loss (p=0.0000), titratable acidity (p=0.0084), soluble solid content (p=0.059), pH (p=0.0015), moisture (p=0.0320) y compression time (p=0.0435); b) time effect: Maximum break force (p=0.0220), elasticity (p=0.0293), skin break energy (p=0.0004), water activity (p=0.0373), spoiled fruit (p=0.0000), dried fruit (p=0.0160) y damage fruits (p=0.0200) y c) treatment effect: elasticity (p=0.0286) and skin break energy (p=0.0595).

Generally MP reduces weight loss and helps to maintenance of overall quality parameters of berries in varying degrees around the 3rd week.