Turkish-type ‘Kırkağaç’ melons (Cucumis melo L. var. inodorus cv. ‘Kırkağaç’) were hand-harvested at a commercial harvest maturity stage from a greenhouse in Turkey (Antalya). Fruits were divided into four groups for the experiments: 1. Control (C), 2. Hazelnut oil (HO), 3. Gaseous Ozone (GO), and 4. NaClO. After the treatments, slices were placed immediately to lidded plastic boxes (500 g capacity) and stored in a cold room at 5 °C and 90 ± 5% relative humidity for 12 days. Fruits were evaluated at three-day intervals for microbial enumeration, firmness, flesh color, titratable acidity (TA), pH, soluble solid content (SSC), weight loss, sensorial attributes (external appearance, taste-flavor and translucency), respiration rate and ethylene production. The integrity of the slices treated with GO was preserved better than those of the others and no juice leakage was observed during storage. According to the results, especially for microbial and sensorial attributes, control, NaClO and HO treated melon slices were preserved their quality for six days, whereas GO treated samples were stored for nine days with good quality.