

II INTERNATIONAL SYMPOSIUM ON SCIENCE AND BIOTECHNOLOGY ENTREPRENEURSHIP AND INNOVATION

GRAPE JUICE STABILITY IN BAG-IN-BOX AND GLASS BOTTLES

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Abstract

This work studied the composition and sensory properties of grape juice after packaging under different configurations: bag-in-box (BIB) and glass bottles. The experiments were carried out over a period of 210 days and analysis were performed at initial time (just before packaging) and after 30, 60, 90, 120, 150, 180 e 210 days of storage. The samples of grape juice were analyzed for soluble solids content (°Brix), pH, titratable acidity measurements (meq), color intensity was determined by the sum of measuring the absorbance of wine at different wave length (420, 520, 620 nm) using a UV-vis. Tint was determined using the formula (Abs_{420}/Abs_{520}) . The total anthocyanins were determined by the pH-differential method. Comparing BIB and glass bottles, in both pH and acid showed the same variations, where acidic get lower with the days pass. BIB shown higher brix than bottles. The total anthocyanins decreased from 240 mg/ 100g just before packaging to 120 mg/100 g after 210 days, the same pattern was observed in both packages. Color index was almost constant during 210 days, while tint shown a slight increase during 210 days in both packages. Thus, we concluded that the grape juice stored in BIB have the same properties of grape juice stored in glass bottles and BIB may be used to substitute glass bottles, which are heaviest and expensive than BIB.

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Keywords - Bag-in-box, grape juice, glass bottles, chemical stability

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