ABSTRACT

Lokio (*Allium chinense G.don*) is a type of onion plant whose leaves are widely used as a food flavor enhancer. This is because Lokio have a distinctive taste due to the presence of free amino acids that affect the taste and volatile compounds that affect the aroma produced. Many of the tubers are used in the health sector as anti-tumor, antimicrobial and antioxidant and are consumed fresh. The use of Lokio leaves and post-harvest handling has not been widely analyzed in the food sector, especially post-harvest handling and its correlation with the taste produced by Lokio leaves. The purpose of this study was to determine the effect of storage temperature on the physical and chemical composition of Lokio and changes in the composition of volatile compounds of Lokio leaves during storage. Lokio leaves were stored at different temperatures, namely room temperature (30ºC) and observed on days 0, 1,2,3 storage, AC temperature (20ºC) was observed on day 0.2,4,6 storage and refrigerator temperature (10ºC). Observed on days 0,7,14 and 21 storage. Then physical observations were carried out which included color using a chromameter,texture using texture analyzer, weight loss using a digital scale and respiration rate using an Oxygen/Carbon dioxide analyzer. After that, the chemical properties were observed, including water content using the oven, protein using the Kjeldal method, fat using Soxlet, ash using a furnace, carbohydrates based on differences, reducing sugars using DNS, volatile compounds using GC MS Headspace and free amino acids using HPLC. The results showed that storage using AC temperature (20ºC) for 4 days was the best storage with respiration rate of O_2 96,80357 ml/kg.hour CO_2 90,57813 ml/kg.hour,weight loss 22,165% ΔE color 3,152991, Texture (*hardness*) 26 .75 g, water content 92.24746 %w/w, fat 2.468%bk, protein 19.045%bk, ash 14.20%bk, carbohydrates with a difference of 64.28%bk, reducing sugar 11.24%. From the analysis, it was found that the volatile compounds found in Lokios were acetaldehyde, propanal, methanethiol, 2 methyl propanal, 3 methyl butanal, 2 methyl butanal, dimethyl disulfide and dimethyl trisulfide. While the amino acid content found in Lokios leaves is aspartic acid, glutamic acid, histidine, glycine, alanine, valine and lysine.

Keywords: *Lokios Leaves, Storage, Physical-Chemical Damage*