

## 4<sup>th</sup> International Conference on **Agriculture & Horticulture** July 13-15, 2015 Beijing, China

## The effect of post-harvest storage and time on the quality of Baby spinach

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**B**aby spinach (*Spinacia oleracea* L.) is a member of the Amaranthaceae family. Baby spinach leaves have a very high respiration rate and the only main problems for keeping its post-harvest quality is tissue decay and off-odours development. Therefore, this study was conducted to investigate the influence of post-harvest storage temperature and time on the quality of baby spinach since baby spinach has low shelf life. Baby spinach seeds were sown in a media composed of sand and plug mix (peat) with a composition of 50:50 under glasshouse. After 36 days all plants were harvested and the leaves were subsequently stored at 4°C and 22°C for 0, 2, 4, 6, 8, 10, and 12 days, respectively and thereafter taken into incubator for 72 hours at 40°C in order to dry up. Parameters recorded were mineral and trace element, total phenols, total carotenoids, flavonoids and antioxidant activities. The results of this study demonstrated that the quality of baby spinach deteriorates as the storage time and temperature increases. Storage time and temperature did not exhibit significant effects on selenium. The level carotenoid contents did not decrease at 4°C whereas at 22°C decreased rapidly after 4 days of storage. Total antioxidant activities decreased after 2 days. Total polyphenols decreased at 4°C and subsequently decreased after 6 days. Trace elements and bioactive compounds deteriorated at 22°C hence at 4°C stored for 6 days significantly lead to a high nutritional value in terms of bioactive compounds of baby spinach.

## **Biography**

Fhatuwani Mudau N is currently working as Professor at University of South Africa, South Africa.

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