Postharvest behavior of *Corchorus olitorius* (L.) as an innovative baby leaf vegetable for the ready to eat industry

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The plant C. olitorius is consider a traditional vegetable in many developing countries and it is cultivated for its potential benefits for human health. The identification of new, potentially high quality leafy vegetables has been promoted by fresh cut industries, which are involved in the processing and commercialization of ready-to-eat food. Thus, the storage of baby leaf of C. olitorius has been studied at 4 °C in darkness in order to promote its commercialization in Europe. Baby leaf were hydroponically cultivated in two different solutions: standard (100%) and halved (50%) during different seasons (spring, summer, autumn) in order to evaluate interactions between the nutrient solutions and quality retain during storage. Several quality traits: sucrose, total and reducing sugars, nitrate, phenolic compounds, anthocyanins, chlorophylls, and carotenoids were analysed during ten days of storage. Results showed that chlorophylls decreased by 20-30% for both nutrient solutions and carotenoid content did not change until the end of the storage and values ranged from 0.60 to 0.75 g kg-1 fresh weight depending on the season. Phenols and anthocyanins decreased within ten days: -40% of phenols and -50% of anthocyanins, respectively. However, no interaction between nutrient solutions and storage behaviour was reported. Moreover, results demonstrated that halved nutrient solution did not negatively affect postharvest performance of this vegetable. Therefore, the reduced nutrient solution can be advised for the reduction of fertilizer input during cultivation and allow the re-use of the nutrient solution for multiple cycles. Moreover, the storage at 4°C preserved the most important quality factors such as chlorophyll, carotenoid and sucrose. Thus, C. olitorius resulted to be a good source of nutraceutical compounds, proving to be ready to be commercialised as baby leaf in RTE market.

Keywords: Ethnic vegetable, African vegetable, storage, RTE salad, anti-oxidants.