

## Changes in nitrate and nitrite levels of blanched amaranthus during refrigeration storage.

### ABSTRACT

Changes in nitrate and nitrite contents (leaves and stem) of *Amaranthus gangeticus* (AG) and *Amaranthus paniculatus* (AP), resulting from blanching, storage time (0-4 days), storage temperature (0 and 4°C), and reheating were analysed. Results showed that fresh AG ( $1859 \pm 7.07$  mg/kg) had higher nitrite content than AP ( $1262 \pm 2.12$  mg/kg). Nitrites content was  $506 \pm 2$  and  $825 \pm 3.5$  mg/kg for AG and AP, respectively. Reheating and storage times significantly increased the conversion of nitrate to nitrite in AG and AP. Storage at 0 and 4°C exhibited a significant change ( $P < 0.05$ ) in nitrate and nitrite contents for both samples. Higher nitrite content was found in AP when stored at 4°C and 0°C. The present study indicated that storage time and temperature affected the nitrite contents in blanched AG and AP when stored in low temperatures. Apart from that reheating was also found to increase the formation of nitrite.

**Keyword:** Amaranthus; Nitrate; Nitrite; Reheating; Storage.