

Title Biochemical changes in the quality of mango cv. 'Sammar Bahisht Chaunsa' during fruit ripening

Author Kashif Razzaq, Ahmad Sattar Khan, Arnan Ullah Malik, Sami Ullah, Muhammad Shahid

Citation Abstracts of 7th International Postharvest Symposium 2012 (IPS2012). 25-29 June, 2012. Putra World Trade Centre (PWTC), Kuala Lumpur, Malaysia. 238 pages.

Keywords Antioxidant; biochemical changes; fruit quality; mango; ripening; total phenolics

Abstract

Mango being climacteric in nature exhibits rapid changes in its biochemical quality attributes soon after harvest. These changes result in short shelflife with very narrow postharvest market window. Present investigations were carried out to observe the gradual biochemical changes in mango cv. 'Sammar Bahisht Chaunsa' fruit during ripening at ambient conditions ($25\pm 1^{\circ}\text{C}$ + 60-65% RH) for 9 days. Fruit exhibited maximum fruit colour (4.88 Score) and weight loss (6.3%) on day 9 (fully ripen stage). Fruit showed significant linear increase in various fruit quality attributes like soluble solid contents (SSC) (8.03-23.0 Brix $^{\circ}$), SSC: titrateable acidity (TA) ratio (7.75-141.0), ascorbic acid (15.48-69.05 mg 100 mL $^{-1}$), total sugars (9.95-16.45%), reducing sugar (0.74-1.73%), non-reducing sugars (8.74-13.98%), total phenolics (65.22-201.62 mg GAE 100 g $^{-1}$) and total anti-oxidants (51.27-72.50% inhibition) throughout the ripening period. Whereas, TA (1.04-0.17%) reduced as the fruit ripening period was progressed. In conclusion, as the ripening period advanced there was a linear increase in the biochemical quality attributes and fruit exhibited the best eating quality at fully ripe stage.