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Antioxidant, total phenolics and sensory properties of fresh blackberries packed in ClO_2 package system

Kirtiraj K. Gaikwad
Michigan State University, USA

Blackberries are a good source of natural antioxidants. The objective of this study was to investigate the effect of Clo2 treatment on total phenolics, antioxidant and color properties of fresh blackberries in different packaging systems. Blackberry are packed with ClO_2 sachets in PET and PLA (0, 4, 8 12, days) and evaluated at 4-d intervals during 12-d storage at 4 ± 1 °C. Total phenolics content in fresh blackberries, control blackberries in PLA were 225.86 mg GAE/100 g on 0^{th} day and 210.76 mg GAE/100 g on 12^{th} day. Whereas treated samples had PLA 200.51, and 284.13 mg GAE/100 g in PLA and PET respectively. The ClO2 treatment showed a significant positive impact on antioxidant properties (μM TE/100 g, FW) of blackberries, as assayed by DPPH (4.48 compared with 4.58, 4.95) FRAP (4.13 compared with 3.80 to 4.78) but in ABTS antioxidant activity affected by treatment (34.84 compared with 34.84 to 34.74). Storage time and treatments showed a mixed trend on pH. Blackberries treated with ClO_2 showed slightly color bleaching in ClO_2 sample than control sample.

Biography

Kirtiraj K. Gaikwad is doing M.S. in Packaging Engineering from Michigan State University, East Lansing, MI, USA. He also did M. Tech in Food Technology from Allahabad Agriculture Institute, Deemed University Allahabad, India. He has published 3 research papers in international and 2 research papers in national scientific journals.

gaikwadk@msu.edu