

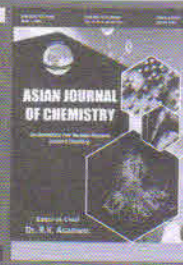


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Comparative Study of the Nutraceutical and Photoprotective Properties of Ethanolic Extracts from Peel and Pulp of Mango (*Mangifera indica* L. cv. TomEJC)

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This research investigated the nutraceutical and photoprotective properties of ethanolic extracts obtained from the peel and pulp of *Mangifera indica* L. 'TomEJC' cultivar. Phytochemical screening indicated the presence of phenols, alkaloids, cardiac glycosides, saponins and coumarins. The mango peel exhibited higher total phenolics (17.69 ± 0.51 mg of GAE per g of dry weight), flavonoid content (13.39 ± 0.43 mg of QE per g of dry weight), antioxidant activity ($IC_{50} = 76.96 \pm 5.11$ μ g/mL) and crude fiber content ($15.66 \pm 0.28\%$) compared to the pulp. The peel extract showed a higher sun protection factor (31.10 ± 1.18) compared to the pulp extract (2.00 ± 0.20), indicating strong UV-B absorption. GC/MS analysis identified several volatile compounds with known bioactivities in the peel extract. Findings suggest that TomEJC mango peel possesses superior nutraceutical and photoprotective properties compared to the pulp, highlighting its potential for applications in the herbal nutraceutical and cosmetic-pharmaceutical industries.

Keywords: *Mangifera indica*, TomEJC cultivar, Mango peel, Antioxidant activity, Photoprotective properties.