

OP 24 - Fruit of *Opuntia dillenii* (katu pathok) as a Source of Natural Coloring Agent

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Background: The importance of natural coloring agents has arisen due to the harmful effects of the synthetic coloring agents.

Objectives: The present study was aimed to use riped fruit of *Opuntia dillenii* (katu pathok) as a source of natural coloring agent mainly for the preparation of flooda drink.

Methodology: Water extract was prepared from blended flesh pulp of *O. dillenii* riped fruits and was subjected to preliminary phytochemical tests. The in vitro radical scavenging activity of the extract was evaluated by using 2, 2-diphenyl-1-picrylhydrazyl (DPPH) assay. Betanin content, vitamin C content, total soluble solids, pH of the fruit pulp were also determined. Ready to consume falooda drink was prepared by using *O. dillenii* fruit extract as a natural food coloring agent. Paired preference sensory evaluation tests were performed between developed falooda drink and commercial falooda drink using 30 semi trained sensory panel. Five point hedonic scale was tested. Complete Randomized Design (CRD) was used as experimental design.

Results and conclusions: Preliminary screening tests revealed the presence of phenolic compounds, flavonoids, carbohydrates, anthocyanin in the fruit extract. The radical scavenging activity was 38.30 ± 0.60 mmolTrolox equivalent/100 g dry weight of fruit extract. Quantity of betanin was found as 26.379 ± 0.225 g/L. Total soluble solids were determined using hand refractometer and expressed as 7.376 ± 0.045 % Brix value. The pH and vitamin C content of the fruit pulp were determined as 2.71 ± 0.06 and 8.612 ± 0.919 mg/100 ml respectively. No significant difference was observed between the new product and the commercial product for all the attributes namely, color, aroma, taste, mouth feeling, sweetness and overall acceptability. It is concluded that the fruit of *O. dillenii* is an excellent source of natural coloring agent in the preparation of drinks.

Keywords: *Opuntia dillenii*, radical scavenging activity activity, colouring agent, phenolics