



Conference Abstract

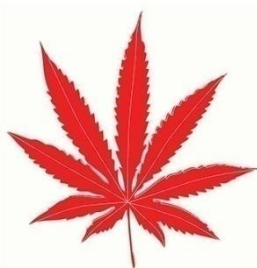
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Conference Abstract

EXTRACTION OF POLYPHENOLS FROM APPLE AND POMEGRANATE PEEL USING
CONVENTIONAL (MACERATION) AND INNOVATIVE (SONICATION) TECHNIQUES

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ABSTRACT

Background: Oxidative stress is a very major problem prevailing in our society. There are natural anti-oxidant compounds that act against such compounds that cause oxidative stress. A group of such compounds are known as polyphenols that are expressively present in fruits and vegetables. Peels contain a significant greater quantity of polyphenols than the pulp does. **Methodology:** In current study, sonication and maceration techniques were employed for extraction of polyphenols. Three different solvents (methanol, ethanol and acetone) were used at two different concentrations (50% and 75%). Evaluation of the extract was done for total phenolic content (TPC), total flavonoid content (TFC), and anti-oxidant activity was measured using DPPH Radical scavenging assay.

Results: The results demonstrated that sonication yields higher quantity of polyphenols than that of maceration, also pomegranate peels extract has higher TPC and TFC content and exhibit greater radical scavenging activity than that of apple peel extract.

Conclusion: The findings of current study lead to a conclusion that pomegranate peels contains greater quantity of polyphenols and flavonoids content and exhibit greater DPPH radical scavenging activity than apple peel.

Keywords: Apple peel, pomegranate peel, food waste, polyphenols, anti-oxidants, maceration, sonication, ultrasound assisted extraction, product development, date bars, total phenolics, total flavonoids, DPPH.

