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Phenolic and flavonoid content in pomegranate (*Punica granatum* L.) fruit peel extracts and its activity

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Pomegranate (*Punica granatum* L.) is a medicinal plant which belongs to Punicaceae and Lythraceae family. The plant is grown in various countries like Iran, Iraq, Afghanistan, Pakistan, India and Mediterranean region. These fruits are known to be source of bioactive phytochemicals which plays vital role in medicinal treatment; it cures various diseases like cancer, diabetes, anaemia, stomach disorder. The main phytochemicals present in fruits are ellagic acid, gallic acid and punicalagins which are responsible for its antioxidant and anticancer property. Keeping that in mind, extraction of pomegranate fruit peel is aimed which would be the source of polyphenols and flavonoids using different polar and nonpolar solvents like n-hexane, DCM, methanol etc. utilizing various extraction techniques. The extraction of dried fruit peel powder was performed with microwave assisted extraction, ultra-sonication, cold percolation, Soxhlet extraction and liquid-liquid extraction. In order to examine phenolic contents in extract total phenolic content (TPC) and total flavonoid content (TFC) was performed. Antioxidant assay was performed using FRAP (Ferric reducing antioxidant power) method to analyze activity of different concentration of extract. To identify the phytochemicals like gallic acid and quercetin, TLC (Thin layer chromatography) is done. The fruit peel extract is found to contain 10 times higher amount of phenolic contains than the pulp. This fruit peel extract maybe used as natural antioxidant and for various biological remedies.

Recent publications

- 1. Dhanani T, Singh R, Shah S, Kumari P and Kumar S (2015) Comparison of green extraction methods with conventional extraction method for extract yield, L-DOPA concentration and antioxidant activity of *Mucuna pruriens* seed. Green Chemistry Letters and Reviews, 8(2):43-48.
- Singh R, Kumari P and Kumar S (2017) Nanotechnology in food industry Volume V: Nutrient Delivery in Grumezescu Alexandru eds., Nanotechnolgy for enhanced bioactivity of bioactive phytochemicals, Elsevier ebook, ISBN: 9780128043752.
- 3. Patel D, Kumari P and Patel N B (2014) Synthesis and biological evaluation of coumarin based isoxazoles, pyrimidinthiones and pyrimidin-2-ones. Arabian Journal of Chemistry, doi:10.1016/j.arabjc.2014.06.010.
- 4. Patel A B, Chikhalia K H and Kumari P (2015) Study of new β-lactams-substituted s-triazine derivatives as potential bioactive agents. Med. Chem. Res. Springer, 24(2):468-481.
- 5. Patel A B, Chikhalia K H and Kumari P (2015) Efficient palladium-catalyzed Suzuki C–C coupling of novel urea/ thiourea-based quinazolines. Res. Chem. Intermediat Springer, 2665-2674.

Biography

Premlata Kumari is an Assistant Professor of Chemistry since 2006; she is the former Head of the Applied Chemistry Department, S V National Institute of Technology, Gujarat, India. She is a Life Fellow Member of Indian Chemical Society and Indian Council of Chemists. She got her BSc, MSc in Organic Chemistry and Doctor's degree (PhD) from University of Allahabad. Three research scholars have been awarded PhD degree and two are working currently under her supervision. On her credit she has about 10 book chapters and 40 research papers published in reputed peer reviewed journals. She is a Reviewer of many reputed journals to name a few; *European Journal of Medicinal Chemistry, Medicinal Chemistry Research, Research on Chemical Intermediates*, etc. Currently her research is focused on the natural products and synthesis of biologically active compounds.

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