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Microscopical characters, phytochemical and antioxidant screening of hydro-alcoholic extract of *Solanum xanthocarpum* and *Mentha arvensis*

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Microscopical characters of *Mentha arvensis* and *Solanum xanthocarpum* leaves were screened. The different ratio of the cold macerated hydro alcoholic standardized dry extract of *Solanum xanthocarpum* (8:1), *Mentha arvensis* (3:1), were analyzed the test of phytochemical analysis, total flavonoids, polyphenol content and antioxidant screening by DPPH method. Microscopical characters of the leaves of *Mentha arvensis* and *Solanum xanthocarpum* were screened by transverse section techniques by using microtome. The both leaves hydro-alcoholic extracts phytochemical screening by color reaction based, the total flavonoids and poly phenol content by spectroscopic method. DPPH method used to perform the antioxidant potential. The both the leaves lamina and mid-rib region presenting the cellular components like parenchyma, collenchyma, vascular bundles, trichomes, types of stomata, calcium oxalate crystals were analyzed. Phytochemical analysis is based on the color reaction present in flavonoids, phenolic groups, tannins and triterpenes both the plant extracts. *Mentha arvensis* hydro alcoholic extract more percentage of total flavonoids (479±66) and phenolic content (936±71) with Solanum xanthocarpum. The antioxidant potential also 92.8% of hydro-alcoholic extract of Menthe arvensis. Microscopical characters were clearly screened for future analysis. Estimation results showed the *Mentha arvensis* potential active constituents of phenolic and flavnoid content. One more advantage the antioxidant potential support to this plant.

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Evaluation of pomegranate (Punica granatum) peel extracts toxicity in BALB/c mice

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Introduction: Pomegranate (Punica granatum) is a significant source of bioactive compounds. However, its toxicity has not been intensively studied. We, therefore, investigated the safety and tolerability of Pomegranate Peel Extract (PPE) in BALB/c mice.

Methods: A total of 25 female BALB/c were randomly grouped with each experimental group consisted of five animals involving. Repeated doses including 0.5, 1.9 and 7.5 mg/kg body weight of PPE were gavages to BALB/c mice for 22 days and the single intra-dermal injection (224 mg/kg) was done in one dose. Control group administrated with distilled water was also included. In addition, intra dermal injection for skin allergy testing was also performed. Blood was collected for evaluation of glucose, cholesterol, Alanine Aminotransferase (ALT) and Aspartate Aminotransferase (AST) as indicators of liver toxicity. Macroscopic and histo-pathological evaluation of tongue, trachea and larynx tissues was also performed at 22 days post administration.

Results: Toxicological potential of PPE studies revealed no toxic effects, no clinical signs, no histo-pathologic effect in epithelial cells layers of tongue, larynx and trachea, no behavioral alterations and no adverse effects or mortality in BALB/c mice. Repeated administrations did not alter or cause local irritation of the oral mucosa. Skin allergy test was negative in the last group.

Conclusion: This study is showed that the PPE has no toxicity and its use is suggested with potential applications against diseases.

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