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Development of Quality Standards of *Tukhm-e-Khatmi* (Seeds of *Alcea rosea* Linn.)

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Tukhme Khatmi (*Alcea rosea* Linn.) is an erect, sparingly branched, 0.5-2.0 m in height herb belongs to family Malvaceae. The seeds of this plant having anti-pyretic, diuretic, anti-inflammatory, demulcent and analgesic properties. In order to have a good quality medicinal plant product it has become essential to develop reliable, specific and sensitive quality control methods by using modern techniques. Keeping in view the importance, the *Tukhme Khatmi* is standardized according to WHO and Pharmacopeial guidelines available for herbal drugs. The Morphological studies revealed that brownish black coloured, reniform seed is approximately 6 mm and having rugose and hair at margin. Extractive values were determined using petroleum, chloroform, methanol and aqueous such as cold (5.2 ± 0.49, 6.2 ± 0.15, 5.8 ± 0.46 & 5.6 ± 0.26 %), hot individual (8.42 ± 0.63, 8.08 ± 0.30, 9.83 ± 0.23 & 16.0 ± 0.95 %) and successive (8.18 ± 0.85, 2.76 ± 0.12, 3.63 ± 0.32 & 11.24 ± 0.14 %). Physicochemical values such as ash values (Total ash 7.3 ± 0.32%; Acid insoluble 1.48 ± 0.16%; Water soluble 3.33 ± 0.2%), loss on drying (8.2 ± 0.38%), pH value (7.13 ± 0.001), and swelling index (5.3 ± 0.16 ml) were also determined. Fluorescence analysis of seed shows characteristics fluorescence with different reagents. Phytochemical analysis revealed the presence of alkaloids, carbohydrates, glycosides, phenolic, flavonoids, proteins and amino acids in methanolic extract. The total phenolic and flavonoid contents of 10 mg/ml of crude powder of *Althaea rosea* seed found to be 0.5% and 0.24% w/w respectively. HPTLC fingerprint of methanolic extract showed 8 spots in Toluene: Ethyl acetate (9: 1) at 254 nm. After spraying 10% H_2SO_4 at 366 nm and at 450 nm, it showed 6 and 14 spots respectively. The morphological, physicochemical, phytochemical and chromatographic studies of this seed would help to determine its quality and nature of adulteration. Further these data could be utilized to standardize the plant material for further studies.

Keywords: *Tukhme Khatmi*, HPTLC, Pharmacognostical, Phytochemical