HPTLC Fingerprinting of *Medicago sativa* root extract as a Quality Control Parameter

Savalia Vaibhavi B, Pandya Devang J*

School of Pharmacy, RK University, Rajkot, India

**Abstract:** *Medicago sativa* Linn. is known as the “father of all foods” (al-fal-fa). *Medicago sativa* used in Ayurvedic, Homoeopathic and Chinese system of medicine in central nervous, digestive system disorders, and for the treatment of various other ailments. The present work focuses on developing a simple HPTLC fingerprint of *Medicago sativa* root extract. Successive maceration was done in increasing order of polarity and toluene, chloroform, methanol and water extracts were prepared. Methanol root extract was used to develop a suitable mobile phase for fingerprinting. Mobile phase development involved several pilot TLC. The mobile phase showing distinct spots in TLC was found to be Chloroform: Ethyl acetate (1:5:5). It was further subjected to HPTLC fingerprinting where *Rf* and Area Under Curve were calculated. HPTLC fingerprinting showed 8 peaks at 254 nm and 6 peaks at 366 nm. This work provides a simple technique for standardization and detection of adulteration of *Medicago sativa* root extract and preparations, consumed by people for the treatment of various disease conditions.

**Keywords:** Alfalfa, *Medicago sativa*, HPTLC, Quality control, Lucerne.

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