

High performance thin layer chromatographic analysis of some analgesic and non-steroidal anti-inflammatory drugs adulterated in herbal products

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Summary: Most herbal medicines adulterated with analgesics, non steroid antiinflammatory drugs were pills and powder especially for treatment of arthritis and muscle pain. The objective of this study was to develop rapid, sensitive and selective method to analyze paracetamol, piroxicam, indomethacine, and diclofenac presented in traditional herbal products using high performance thin layer chromatography. The mobile phase comprise of n-hexane, ethyl acetate, acetic acid (6:2.5:1.5 v/v/v). The R_f values of paracetamol, piroxicam, indomethacine, and diclofenac were found to be 0.20, 0.39, 0.58 and 0.65 respectively. The LOD of paracetamol, piroxicam, indomethacine, and diclofenac were found to be 50 ng.spot⁻¹, 50 ng.spot⁻¹, 250 ng.spot⁻¹ and 250 ng.spot⁻¹ respectively. The method so developed was validated for its accuracy and precision in accordance with AOAC. It took 15 minutes to analysis 10 samples of herbal products. In 29 herbal products tested by HPTLC method, there is one product detected containing paracetamol with 2.51 mg/tablet.