

## HPTLC Fingerprinting of *A. longifolia* Nees, *W. somnifera* and *C. officinalis*

**Rajesh Singh Pawar and Dr. A.K. Singhai**

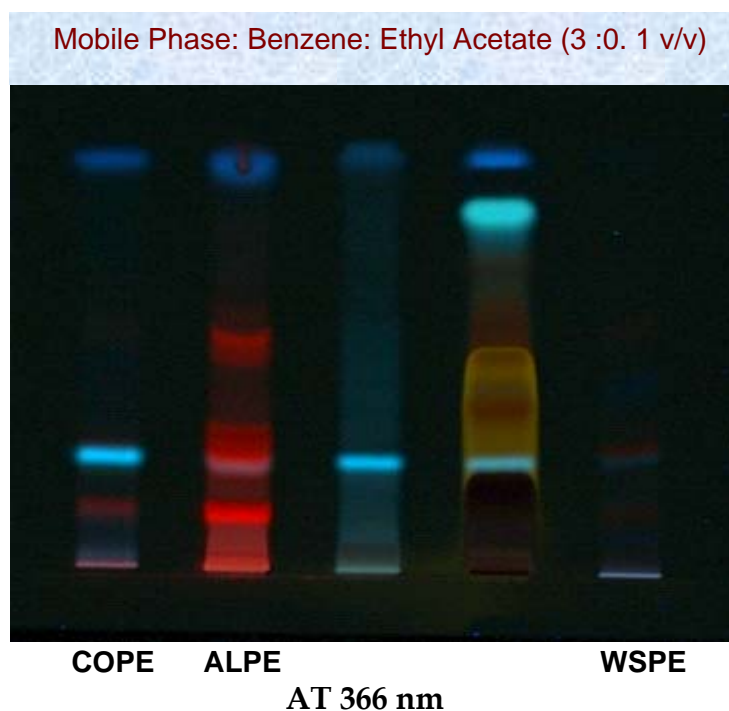
Division of Pharmacognosy and Phytochemistry  
Department of Pharmaceutical Sciences  
Dr. H. S. Gour University  
Sagar, (M.P.)-470003  
E-mail: rajeshabc14@rediffmail.com

### **Abstract**

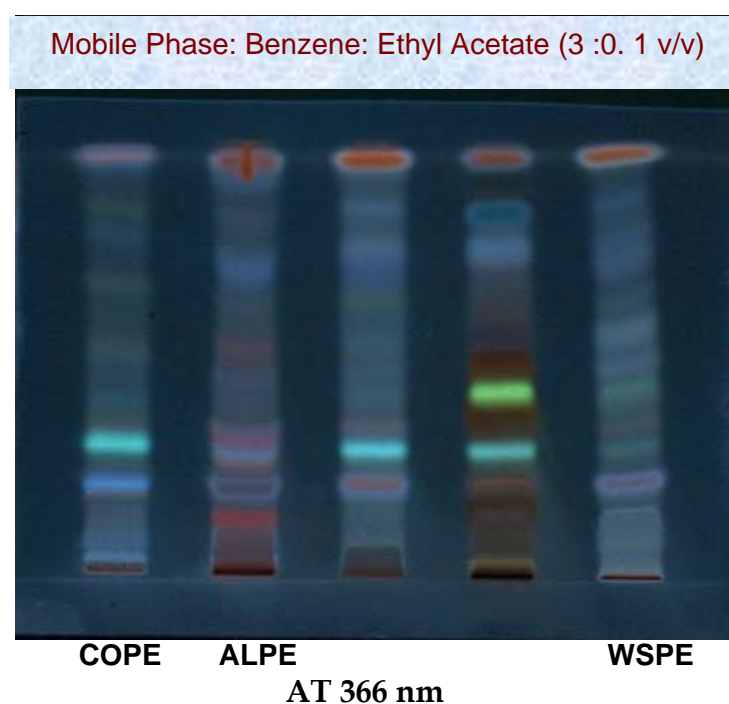
High performance thin-layer chromatography (HPTLC) can successfully be employed for fingerprinting of *A. longifolia* Nees (AL), *W. somnifera* (WS) and *C. officinalis* (CO). In this study, Plants were extracted with petroleum ether (60-80°C). Developed the TLC profile of petroleum ether fraction of AL, WS and CO prior to perform the HPTLC. Using the mobile phase benzene: ethyl acetate (30:0.1 v/v) and silica gel G 60 F<sub>254</sub> TLC plates as a stationary phase. The prepared sample concentration 100 µg/5µL of petroleum ether extract of AL, WS and 50µg/5µL of CO were applied as a spot on TLC plate and scanned at 500 nm.

The HPTLC profile of petroleum ether extract of *A. longifolia* revealed the presence of seven spots at R<sub>f</sub> 0.10 (4.64 µg), 0.18 (12.31 µg), 0.29 (6.01 µg), 0.42 (4.04 µg), 0.57 (2.65 µg) and 0.65 (11.07 µg), the maximum concentration was found to be of component 7 at R<sub>f</sub> value 0.87 (59.29). The HPTLC profile of petroleum ether extract of *W. somnifera* observed the presence of nine spots at R<sub>f</sub> 0.13 (6.61 µg), 0.20 (15.20 µg), 0.33 (1.74 µg), 0.38 (7.28 µg), 0.45 (8.67 µg), 0.52 (11.78 µg), 0.68 (7.87 µg), 0.81 (3.89 µg), the maximum concentration was found to be of component 9 at R<sub>f</sub> value 0.90 (36.97 µg) shown in Photograph 1 & 2. The prepared sample concentration 50µg/5µL of petroleum ether extract of *C. officinalis* was applied as a spot on TLC plate. The HPTLC profile of petroleum ether extract of *C. officinalis* observed the presence of nine spots at R<sub>f</sub> 0.10 (3.43 µg), 0.18 (2.83 µg), 0.20 (2.72 µg), 0.32 (2.99 µg), 0.48 (2.82 µg), 0.61 (3.995 µg), 0.72 (1.92 µg), 0.78 (3.78 µg), the maximum concentration was found to be of compound 9 at R<sub>f</sub> value 0.88 (25.525 µg) shown in Photograph 1 & 2.

## HPTLC CHROMATOGRAM BEFORE DERIVATIZATION



## HPTLC CHROMATOGRAM AFTER DERIVATIZATION (50% METHANOLIC H<sub>2</sub>SO<sub>4</sub>)



Photograph: 1 & 2 TLC Profile of Petroleum Ether Extract of COPE, ALPE and WSPE,

COPE: Petroleum ether extract of *C. officinalis*

ALPE: Petroleum ether extract of *A. longifolia*

WSPE: Petroleum ether extract of *W. somnifera*