

DEVELOPMENT AND VALIDATION OF A HPTLC METHOD FOR QUANTITATIVE ESTIMATION OF EUGENOL, A MARKER COMPOUND OF TULSI (*OCIMUM TENUIFLORUM*) IN CLASSICAL AYURVEDIC FORMULATION AYUSH KWATH CHURNA

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ABSTRACT

The emergence of SARS-CoV-2 virus as a major health hazard increased interest in traditional formulations from Ayurveda such as Ayush Kwath Churna (AKC), which are recognized for their ability to boost immunity. But due to the possibility of contamination, there is a need for an effective quality control procedure. This study sought to develop and validate a simple, efficient and sensitive high-performance thin-layer chromatography (HPTLC) technique for the identification and quantification of eugenol as marker substance in AKC. Methanolic extract of AKC was analyzed on HPTLC silica gel 60 F254 plates using toluene:chloroform:methanol and formic acid (4:4:1:0.3 V/V/V/V) as optimized mobile phase. Detection was carried out at 282 nm. The method was validated as per ICH Q2(R1) guidelines. The linear range concentration of eugenol was found to be from 100 – 700 ng spot⁻¹ with R_f value of 0.40 ± 0.018. The limit of detection (LOD) and limit of quantitation (LOQ) values were 0.13 and 0.40 µg spot⁻¹, respectively.