

Determination of the Dry Extract of Ginkgo Biloba Leaves Residues on Pharmaceutical Equipment Surfaces by High Performance Thin Layer Chromatography

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High-performance thin-layer chromatography method for determination of residual amounts of dry extract of Ginkgo biloba leaves (from content of quercetin) in washings from surfaces of pharmaceutical equipment by was developed. Detection was performed by densitometric scanning by measuring of absorbance at a wavelength 380 nm. It was found that intensity of analytical signal from quercetin in adsorbent phase has time-dependent character. This effect can be due to interaction of quercetin with fluorescent indicator UF 254 (zinc silicate) that presents in the adsorbent phase. It was demonstrated that addition of protonic prevents the complex formation and thus stabilize the signal. Sufficient stability of the signal is observed at next reagents ratio - quercetin (μg): phosphoric acid, 85% (μL) = 1:1. The method was validated on the following parameters: specificity, linearity, precision, limit of detection and limit of quantification. The calibration curve was linear over the concentration range of quercetin 10.0–50.0 ng/spot, the limit of detection - 4.5 ng/spot. The degree of recovery of the dry extract of ginkgo biloba leaves from the surface of the pharmaceutical equipment is greater than 95%.

Keywords: high performance thin layer chromatography, dry extract of ginkgo biloba leaves, quercetin, cleaning of pharmaceutical equipment
