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LARGE VOLUME INJECTION OF HEXANE SOLUTIONS IN RPLC/UV TO ENHANCE ON SENSITIVITY OF THE ASSAY OF GINKGOLIC ACIDS IN *GINGKO BILOBA* STANDARDIZED EXTRACTS

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□ *The sensitivity of the compendial European Pharmacopoeia RPLC/UV method for assaying residual ginkgolic acids in Ginkgo biloba standardized extracts was essentially improved by operating modifications on the sample preparation procedure, including sample injection. The acidified methanol/water solution of the Ginkgo biloba standardized extract was extracted "in situ" with n-hexane (concentration factor of 20). From the organic layer, a relatively large volume (50 μL) of the hexane solution was directly loaded to the chromatographic column. A modified gradient elution profile was used in order to force the sample solvent to elute faster than analytes, without affecting peak symmetry. The separation is obtained in 22 minutes. As the amount of the target compounds loaded to column is higher, selective UV detection at 310 nm was possible. The method was validated according to specific operating guidelines for selectivity, linearity range, quantitation limits, precision, accuracy, and robustness. A limit of quantitation of 1 ppm (five times less than the accepted maximal content threshold for ginkgolic acids in standardized G. biloba extracts) was obtained. Confirmation of the target compounds through MS^2 detection and evaluation of the sensitivity afforded by such a detection system are also discussed.*

Keywords direct injection of n-hexane solutions, ginkgolic acids, improved sensitivity, liquid-liquid extraction, RPLC/UV, validation

INTRODUCTION

Ginkgolic acids (GA) and their structural related alkyl phenols (cardanols and cardols) are constituents of the products deriving from *G. biloba* vegetal materials.[1,2] Although these compounds have recognized molluscicidal, antimicrobial and antitumoral properties,[3] their contact allergenic, cytotoxic, mutagenic and neurotoxic potential was also

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