Abstract (EN)

This work has been focused on the development and optimization of analytical methodology, using high performance liquid chromatography with diode array detection (HPLC-DAD) and high performance liquid chromatography with diode array and tandem mass spectrometric detection (HPLC-DAD-MS/MS) for the determination of amatoxins (α- and β-amanitin) and phalotoxins (phallacidin and phalloidin) in the crude extract from cap of *Amanita phalloides* with the option to later use for clinical purposes. In order to guarantee the reliability of the analytical results the influence of various parameters on the quality of the separation and the determination of toxins was studied. The developed HPLC-DAD method achieves good linearity in the concentrations range 1 – 100 μg/ml, with correlation coefficients higher than 0,997. Limits of detection (LOD) and quantitation (LOQ) were calculated for all the studied toxins with following values: for α-amanitin 0,90 μg/ml (LOD); 2,99 μg/ml (LOQ), β-amanitin 1,07 μg/ml (LOD); 3,56 μg/ml (LOQ), phallacidin 2,17 μg/ml (LOD); 7,26 μg/ml (LOQ) and phalloidin 0,79 μg/ml (LOD); 2,64 μg/ml (LOQ).

Key words: *Amanita phalloides*, α-amanitin, β-amanitin, phallacidin, phalloidin, solid-liquid extraction, HPLC-DAD, HPLC-DAD-MS/MS

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