Abstract

Pterins belong to an important group of compounds, acting as inhibitors, sensiziters, enzymes, coenzymes, pigments etc. and together with carotenoids and anthraquinones are responsible for characteristic coloration of bugs. This work was focused on the development of a capillary electrophoretic separation method for the analysis of six pterine derivatives, namely biopterine, neopterine, isoxanthopterine, leukopterine, xanthopterine and erythropterine and on their identification in the real samples. Separation was conducted in an uncoated fused-silica capillary termostated at 30 °C. Separation electrolyte contained boric acid, tris(hydroxymethyl)aminomethane and disodium salt of ethylenediaminetetraacetic acid. The effects of buffer pH, concentration of electrolyte components, separation voltage and wavelength of UV detection on electromigration behavior and detection sensitivity were studied. Under the optimized separation conditions, organic extracts of the three forms of *Graphosoma semipunctatum* bugs were analyzed.