

Abstract

Pterines belong to an important group of compounds, acting as pigments in many species. Some of them are probably responsible for characteristic coloration of the insect group (*Hereroptera*). This coloration is considered to be a visual warning signal for optically orientating predators (birds, lizards etc.). In this work, pterines in the species of *Graphosoma semipunctatum* have been investigated by high performance liquid chromatography. To develop an appropriate separation method, the reverse-phase separation mode with C18 stationary phase (Spherisorb ODS 2) and binary mobile phase (organic modifier/buffer or water) was used. The effect of type and content of organic modifiers (methanol, ethanol, tetrahydrofuran) and concentration of phosphate buffer pH 3.0 (10 - 30 mM) in the mobile phases on retention and separation behavior of the studied pterines (leukopterin, biopterin, xanthopterin, isoxanthopterin and erythropterin) was studied. Under the optimized separation conditions (5/95 (v/v) methanol/20 mM phosphate buffer, pH 3.0, flow rate 0.7 ml.min⁻¹, UV detection at 290 nm), the extract from the integument of *Graphosoma semipunctatum* was analyzed.