

Determination of senecionine and senecionine N-oxide in honey samples using large volume injection HPLC/MS/MS

Lizandra Czermainski Bretanha, Gustavo Amadeu Micke and Moacir Geraldo Pizzolatti
Federal University of Santa Catarina, Brazil

A method was developed for the determination of pyrrolizidinics alkaloids in honey combining large volume sample injection with high performance liquid chromatography and electrospray mass spectrometric detection. The method allowed determination of senecionine and senecionine N-oxide alkaloids and offered a considerable improvement in terms of speed, sensitivity and specificity over previous approaches, principle because the sample preparation is only dilution of the sample without SPE procedure, this approach improve the recovery. The optimization of large volume injection explores the sugar content and pH. The effect of sugar out was observed in optimization. To inject sample with large sugar content, valve switch was used to maintain the source cleaning where the high sugar content was eliminated before analyte reach the source. Detection limits in honey was 0.001 mg/kg with good performance. The alkaloids have been determined in a number of samples of honey. The method was applied to commercial sample acquired in local market and selected suppliers in Santa Catarina State, Brazil.

lbretanha@gmail.com