

Highlights

1. A novel method for the simultaneous quantification of 4 nucleotides using cyanopropyl (CN)-based LC-MS/MS without an organic solvent and a phosphate buffer was developed.
2. For the detection of nucleotides in royal jelly, two pre-processing methods including SLE-SPE and SLE-dSPE were developed that reduce matrix effects significantly.
3. This method was successfully used for the quantitation of nucleotides in the 2-day and 3-day royal jelly samples.