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Newly developed UHPLC method for the determination of omeprazole in oral suspensions

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Ultra-high performance liquid chromatography (UHPLC) presents relatively new technique providing exceptional separation efficiency. Connection of UHPLC with the core-shell particles as a stationary phase is very advantageus. The porous surface of core-shell particles allows faster mass transfer and reduce the swirl effect as well as the back pressure of column, UHPLC enables fast and senzitive analyses. The new separation method was developed on Kinetex™ C18 column (50×2.1 mm) with core-shell particle size of 1.7 μm. The mobile phase was phosphate buffer (25 mM, pH 7.6) and acetonitrile in the ratio 74: 26 (v/v) with total time of analysis 2 minutes and internal calibration. Full validation was performed. The new method was used to monitor the stability of the active substance – omeprazole (proton pump inhibitor) in suspensions and will serve for monitoring of omeprazole stability in individually prepared oral suspensions for pediatric, elderly as well as critically ill patients having problems to wallow solid dosage form.

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Biography

Kucerova K has completed her Master's degree from Charles University in Prague at Faculty of Pharmacy in Hradec Kralove. Presently, she studies Post-graduate Doctoral Course in Bioanalytical Chemistry at the same faculty. She is interested in liquid chromatography with UV detection and optimization of sample pretreatment.

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