

This Bachelor thesis dissertates about the influence of electromigration dispersion and Taylor dispersion to the total peak dispersion. Firstly, it deals with a solution to a new mathematical theory for peaks influenced by the EMD that was discovered in our research group and it experimentally proves the rightness of the solution. Specifically, it deals with comigration of two analytes with similar mobilities. Secondly, the goal was to find how the Taylor dispersion influences the separation process. This opens a way to further research on how these two effects collide and how they influence the system and separation process together.