

Root exudates from germinated English grass seeds were analyzed by HPLC with UV detection (210 nm) in the first part of this thesis. Column Acclaim OA 4 x 150 mm, Dionex was used, temperature was ambient and as a mobile phase served 100 mM sodium sulphate (pH 2.65) with flow rate 0.6 ml/min. Injection volume was 40 μ l, the measurement run under isocratic conditions. Standards were solutions of oxalic, tartaric, formic, malic, *iso*-citric, lactic, acetic, citric, succinic, fumaric, *cis*-aconitic and *trans*-aconitic acid and their mixture. Chromatograms from these measurements were compared to one another and with regard to literature it was gathered from, that oxalic and tartaric acid and maybe malic and acetic acid is present in the exudates. This supposition was proved by HPLC with diode-array detector.

The second part of this work consisted in analyses of samples of root exudates by means of HPLC with diode-array detection with possibility of gradient elution. Column ProntoSIL 250 x 3 mm, Bischoff was used, temperature was ambient and the mobile phase was 50 mM *ortho*-phosphoric acid with flow rate 0.7 ml/min. Volume 10 μ l was injected. Solutions of oxalic, tartaric, malic, acetic, citric and fumaric acids and their mixture were used as standards. Absence of any of supposed acids in samples was concluded after comparing of the chromatograms of samples and studying of purity spectra.