(Q6) (10 points max)

Draw the reaction scheme.

(a) Equilibrium acids
(b) Amine

Propose detoxification regents for:

(4) (6 points max)

Estimate the elution order of the compounds. Explain your answer briefly.

(a) Liquid chromatography on normal phase
(b) Liquid chromatography on reversed phase at pH 3
(c) Gas chromatography with 5% Dimethyl 5% Phenylpolysiloxane capillary column
(d) Size exclusion chromatography

A mixture of substances 1-4 was separated using:

(4) (6 points max)

Explain your answer briefly.

(a) Analysis of pesticides
(b) Analysis of H2O/CH2O/CO2 mixture
(c) Analysis of aromatic/unaromatic hydrocarbons
(d) Gas chromatography (detector: FID)

Propose an LC (Gas chromatography) detector for:

(4) (6 points max)

Give definitions and formulae for: Retention time; Relative Retention; Capacity Factor; Resolution between peaks

(4) (6 points max)

Give examples of the stationary phases, mobile phases and analytes typically used in:

(4) (6 points max)

No additional materials allowed on the exam.
Audition: 13:00-16:00
Examination date: 08.05.2018
Examiner: Lec: Alexander Efimov, FC218/KEB

KEB-6437 "CHROMATOGRAPHY AND MASS SPECTROMETRY"