

ABSTRACT

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Title of diploma thesis: Development of extraction procedure for determination of tocopherols

In the present work liquid-liquid extraction for determination of alpha, beta, gamma and delta tocopherol from human serum was developed miniaturized. Individual extraction steps as deproteinization, centrifugation, evaporation and final filtration were optimized. Solid supported liquid extraction (SLE) was also tested for determination of tocopherols and seems to be very promising for use in bioanalysis. During the miniaturization of the extraction procedure the main emphasis was placed on simplicity, speed and low consumption of samples and solvents. Method was also partly validated.

The new extraction process is part of an already developed UHPLC method for the determination of individual forms of tocopherols and will serve to determine the antioxidant capacity of cancer patients during the chemotherapy treatment.

Key words: tocopherols, LLE, SLE, biological material