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Abstracts

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Development of a Simple, Cheap Routine Method of Determination of Kynurenine in Plasma Blood by HPLC

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A new simple, fast, method of determination of kynurenine in plasma blood by HPLC, ultraviolet light filter detection have elaborated on.

Kynurenine is the main metabolite in tryptophan metabolism. It takes part in the pathogenesis of many disorders. The determination of kynurenine is important for diagnosis of the remission of epilepsy.

We used a chromatograph made by Laboratorni Pstroje Praha which consists of isocratic pump HPP 4001, photometric detector LCD 2563, line recorder TZ 4601, Rheodyne Model 7125 injection valve with sample loop 20 μ l (Rheodyne, Cotati, California, USA), glass columns (150 mm \times 3,3 mm i.d. packed with Separon SGX CN 7 μ m) in a steel cartridge, Analog to Digital Converter (NeoChrom, Research on Demand Lab Company, Ukraine, Zaporozhye). All previous scientists had used C₁₈ or C₈ phases[1-3].

An ultraviolet light filter at 365 nm was used. The mobile phase consists of 10 mmol/L ammonium acetate and acetic acid with a pH value 3.1. We studied dependence of retention time from pH, the content of salt. During raise of the pH level, retention time increases. We tried to describe the mechanism of separation. It was obtained satisfactory separation of kynurenine from matrix (Fig. 1).

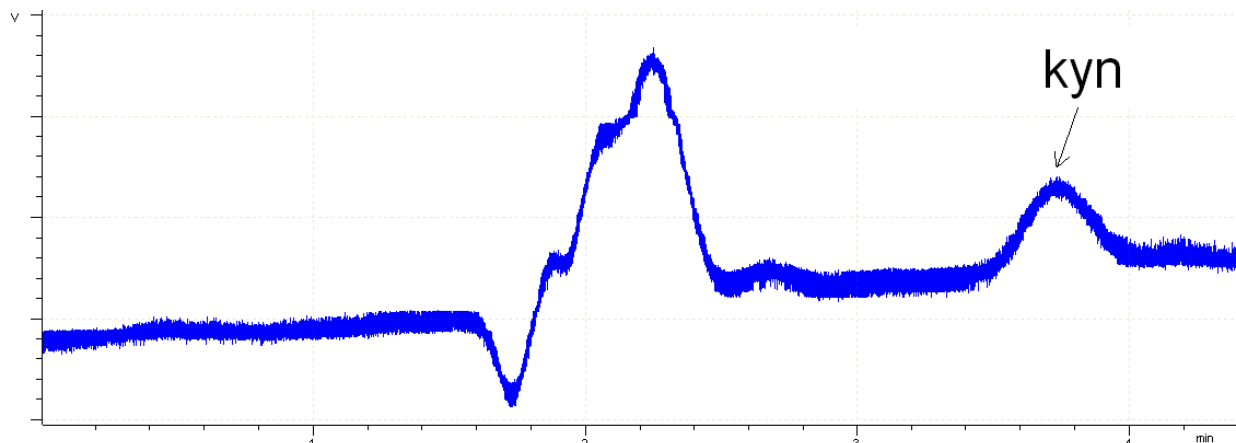


Fig. 1. Chromatogram of kynurenine in plasma blood of patient with epilepsy.

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