

## KINETIC ISOTOPE EFFECTS IN ENZYMATIC DECOMPOSITION OF L-TYROSINE

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In the living cells, the enzyme L-tyrosine phenol lyase (TPL, E.C. 4.1.99.2.) catalyses decomposition of L-tyrosine (L-Tyr) to phenol, pyruvate and ammonia. TPL also participates in the formation of many important derivatives of L-Tyr, e.g. L-Dopa. The decomposition of L-Tyr is a multistep reaction and some intrinsic details of this process are still unclear. The aim of the study is the investigation of the mechanism of TPL reaction with kinetic isotope effect (KIE) method. The necessary isotopomers of L-Tyr labeled with tritium or/and carbon-14 were synthesized and values of KIEs were determined. The obtained results were discussed in the terms of the reaction mechanism.