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(57) Abstract :

The present invention discloses a system for evaluating accurate estimation of essential enzyme kinetic parameters and method thereof. The system is including, but not limited to, a canonical approach used to understand enzyme kinetics based on the Michaelis-Menten equation (MM equation) using the standard quasi-steady-state approximation (sQSSA); wherein the equation describes the dependence of enzyme-catalyzed reaction rates on the concentration of substrate by using two parameters, the catalytic constant, k_{cat} and the Michaelis-Menten constant, K_M , and $T_e K_{cat}$ determines the maximum rate of the reaction at saturating substrate concentrations, $V_{max}=k_{cat}ET$, where ET is total enzyme concentration, and the K_M is the substrate concentration at which the reaction rate is half of V_{max} .

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