



## ABSTRACT

The present invention is a simple method for assaying an enzyme modulator comprising the steps: (a) immobilizing an enzyme on an interior wall of a reaction vessel to form an immobilized enzyme; (b) conducting in the reaction vessel in the presence of the immobilized enzyme a reaction catalysed by the enzyme and determining spectroscopically the initial rate of the reaction ( $V_0$ ) in the reaction vessel; (c) incubating with the immobilized enzyme a sample potentially containing an amount of an enzyme modular so as to form an immobilized modulated enzyme; (d) repeating step (b) in the reaction vessel in the presence of the immobilized modulated enzyme and determining spectroscopically the initial rate of the modulated reaction ( $V_1$ ) in the reaction vessel; and (e) comparing  $V_1$  and  $V_0$  to determine the effect of the enzyme modulator. By conducting each reaction in the same reaction vessel, each vessel therefore serves as its own control, effectively eliminating variability from one reaction vessel to the next. Because the initial rate of reaction is determined, the enzyme reaction is not required to be stopped at a certain end point and no stopping solution is needed. As a result, the enzyme is not destroyed and the same well can be used for the modulator assay. Moreover, if the modulator is found to be absent, the well can actually be recycled for another round of detection with another sample.