2.1 According to Michalis-Mentin kinetics [1]

ES is the complex which can be represented by alias C. Therefore , s,e,p, es © represent the concentration of S, E, P and ES)C) respectively. From the law of mass actions the following 4 ordinary differential equations can be derived for s,e, p and es :

ds/dt = - k1es + k2c; (1)

dc/dt= k1es - k2c -k3c (2)

de/dt = - k1es + k2c + k3c (3)

dp/dt = k3c (4)

[1] https://courses-archive.maths.ox.ac.uk/node/view_material/52366