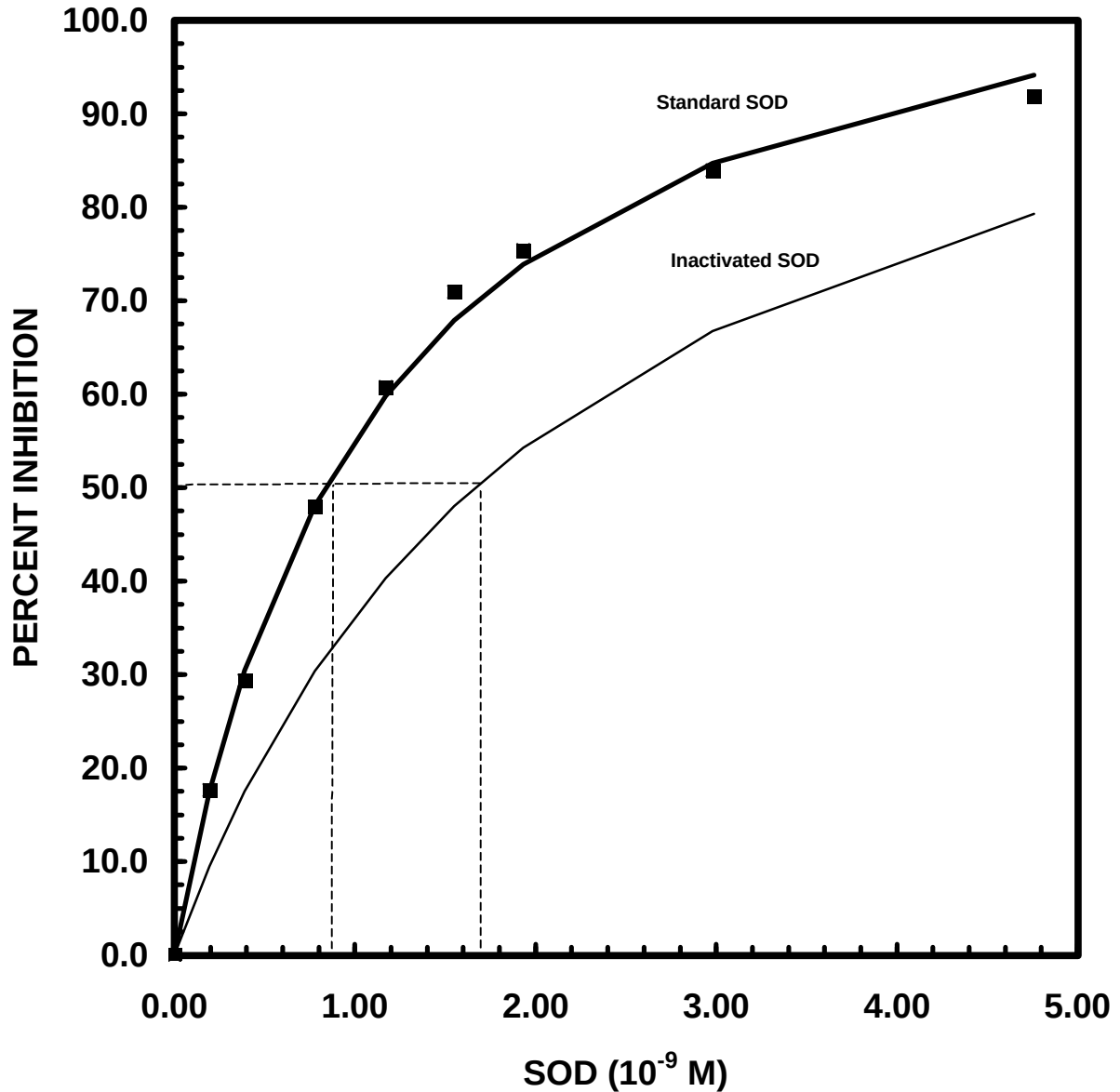


Effect of Inactivation on SOD₅₀
SOD assay based on the inhibition of the oxidation of epinephrine



Change in the unit of superoxide dismutase activity (SOD₅₀) with inactivation of the enzyme. The SOD₅₀ for the native enzyme is $0.832 \times 10^{-9} \text{ M}$. The dotted line indicates the shift in the data when the enzyme is 50% inactivated, giving an SOD₅₀ of $1.66 \times 10^{-9} \text{ M}$, twice that of the untreated native enzyme. This means that the treated enzyme is 50% active when compared to the untreated enzyme:

$$\frac{(\text{SOD}_{50} \text{ native})}{(\text{SOD}_{50} \text{ inactivated})} \times 100\% = \frac{0.832 \times 10^{-9} \text{ M}}{1.66 \times 10^{-9} \text{ M}} \times 100\% = 50\%$$