

# Tyrosinase Inhibition Kinetics of Anisic Acid

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Anisic acid (*p*-methoxybenzoic acid) was characterized as a tyrosinase inhibitor from aniseed, a common food spice. It inhibited the oxidation of L-3,4-dihydroxyphenylalanine (L-DOPA) catalyzed by tyrosinase with an IC<sub>50</sub> of 0.60 mM. The inhibition of tyrosinase by anisic acid is a reversible reaction with residual enzyme activity. This phenolic acid was found to be a classical noncompetitive inhibitor and the inhibition constant  $K_I$  was obtained as 0.603 mM. Anisic acid also inhibited the hydroxylation of L-tyrosine catalyzed by tyrosinase. The lag phase caused by the monophenolase activity was lengthened and the steady-state activity of the enzyme was decreased by anisic acid.

*Key words:* Tyrosinase Inhibitory Activity, Anisic Acid, Noncompetitive Inhibition Kinetics