

# The Inhibitory Effect of Garlic Extract on Soybean Lipoxygenase

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The bioactivity of garlic extract was evaluated, based on the inhibition of soybean lipoxygenase. While the chloroform extract of garlic homogenate showed 50% inhibition of enzyme activity ( $I_{50}$ ) at the concentration of 37 mg garlic/ml the aqueous fraction possessed  $I_{50}$  value of 29.0  $\mu$ l/ml.

In the related study, garlic oil demonstrated time-dependent inhibition of lipoxygenase with  $I_{50}$  of 8  $\mu$ l oil/ml. Meanwhile, S-ethyl-L-cysteine sulfoxide or dimethyleisulfide was found not to be effective to inhibit soybean lipoxygenase. In addition, heat-boiled garlic lost the inhibitory effect.

These results suggest that the unstable components in garlic extract are responsible for the inhibition of soybean lipoxygenase.