INHIBITION KINETICS OF *B. cinerea* USING *Allium savitum*, AND *Ficus carica.*

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Introduction. The use of chemicals to control fungus and rot in some fruits and vegetables by postharvest application of fungicides and pesticides, has been a common practice in controlling fungi and decay. However, the use of these chemicals has been restricted because of their carcinogenic, teratogenic, and acute high waste, long period of degradation, environmental pollution and other negative impacts on food and human (Triapathi, 2004). Furthermore, there are numerous reports on the application due to intense synthetic products has generated resistance in pathogens.
The objective of this work was to evaluate the inhibition kinetics of *Botrytis cinerea* using different vegetable extracts.

Methods. *Botrytis cinerea* was proportionated by Biorganix Mexicana SA de CV. The strain was cultured in PDA at 25±2°C. The *Allium savitum* (garlic) and *Ficus carica* extracts were produced by Biorganix Mexicana. Inhibition kinetics of *B. cinerea* was performed in poisoned culture at 0, 0.25, 0.50 and 1% of the extract.

Results. The figure 1 shows the inhibition curve of *B. cinerea* in PDA with garlic extract (*Allium savitum*); in the concentration of 0.25% is observed exponential growth at 24 h of incubation with a 35.04% of inhibition; in the concentration of 0.50% the range or inhibition were in the values of 5.9% and using the garlic at 1.0% the inhibition was 26.37%. The inhibitory power of garlic is due to its active component diallyl sulfide, it should be emphasized that even though it is reported by several authors that garlic extract have a broad reference to its inhibitory action on pathogenic bacteria, fungus and microorganisms mycotoxigenic organisms having in common sulfidrilic enzymes (Rodriguez, 2011). Figure 2 shows the comparison between the control growth curve and the inhibition curves to apply the three different concentrations of extract; at 25% the % of inhibition was 15.74, at 0.5% was 41.33 and at the concentration of 1.0% the inhibition were in the range of 74.8% respect to the control.

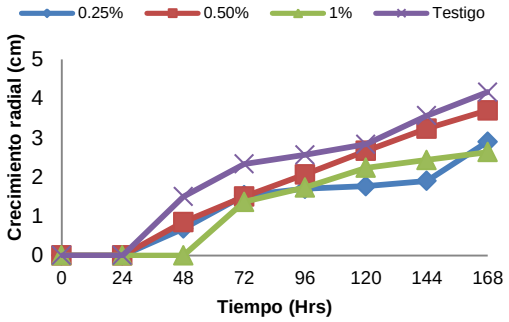

Fig 1. Inhibition growth curve using *Allium savitum* over *B. cinerea* in PDA at 25°C.

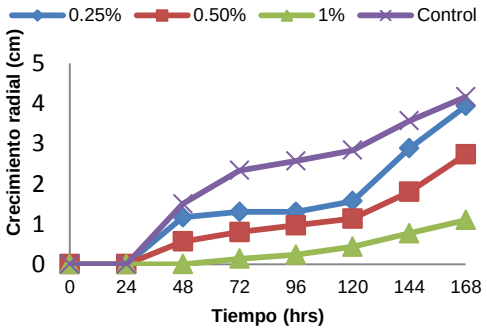

Fig 2. Inhibition growth curve using *Ficus carica* over *B. cinerea* in PDA at 25°C.

Conclusions. No conventional vegetable extracts represent an alternative to inhibit phytopathogens microorganisms.

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References. 1. Triapati (2004). . Exploitation of natural products as an alternative strategy to control postharvest fungal rotting of fruits and vegetables. Porharvest Biology and Technology 32, 235-245.