

**PURIFICATION AND CHARACTERIZATION OF PROTEASES PRODUCED BY
Trichoderma harzianum FROM BRAZIL CERRADO SOIL AGAINST *Fusarium
oxysporum*.**

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Trichoderma harzianum is successfully used as a biocontrol agent against a set of foliar and soil plant pathogens. In the present work, 15 *T. harzianum* isolates are studied as a biocontrol agent against *Fusarium oxysporum*. Since hydrolases cell wall are very important in the mycoparasitism, these isolates were also studied as hydrolytic enzymes producers. Moreover, one of the alkaline proteases produced by the ALL-49 isolate was purified and will be further biochemical and molecular characterized. *T. harzianum* isolates were grown in the presence of *F. oxysporum* mycelium, the supernatant cultures of ALL-28 and ALL-49 showed the higher values of alkaline proteolytic activity. Seven isolates produced at least two alkaline proteases isoforms. Previous studies showed that ALL-49 isolate is also able to inhibit *F. oxysporum* growth and development. In order to described and characterized proteases involved in the biological control mechanism of ALL-49, these isolate was used as a source of proteases. One alkaline protease of ALL-49 produced in response to the presence of *F. oxysporum* mycelium was purified after chromatographic procedures using Phenyl-Sepharose and SP-Sepharose columns.

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