

BIOCHEMICAL CHARACTERIZATION OF THE METALLOPROTEASE FROM  
THERMOPHILIC FUNGUS *Thermoascus aurantiacus*.

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Thermophilic proteases exhibit thermostability as an inherent characteristic, which allows them to support high temperatures without going through denaturation. Due to this fact, they are suitable for many industrial applications. The aim of this work was to characterize the purified protease from the thermophilic fungus *Thermoascus aurantiacus*. The enzyme exhibited optimum pH at 5.5 and optimum temperature at 75°C and maintained 50% of activity at 70°C for 3 hours. It lost activity in the presence of detergent Triton X-100 at 0.2% but its activity increased in the presence of Tween-20 at concentrations higher than 0.2%. The enzyme was inhibited by EDTA, revealing that it is a metalloprotease and it was activated by iron, confirming the inhibition result. The enzyme was inhibited by 0.5 M NaCl. It supported 300 mM DTT with only 50% of activity loss and in the presence of 5 M urea it maintained its activity.

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