Clinical strain *Microsporum canis* was isolated from specimen of patient with Tinea corporis in arm and it has ability to produce extracellular keratinolytic protease in a broth containing human hair. The enzyme was partial purified 35.8-fold from culture filtrate by sequential steps through salting out with ammonium sulfate precipitation (80% saturation), ion exchange Chromatography by batch wise ion exchange by CM-Cellulose cation resin and anion resin by DEAE-cellulose column.

The partially purified enzyme had an optimum activity at pH 9 and maximum activity at pH 11. The activity was stable in the alkaline pH 9 for 30 min at 25°C. Enzyme activity toward casein increased when temperature raised more than 20°C and maximal activity attained at 55°C. The enzyme was stable at temperature under 25°C and approximately 80% of its activity abolished by incubation of the enzyme at 60 °C for 30 min. Protease had activation energy equal 3.314 Kcal/Mole that to be able to transform casein to product. On the other hand, the activation energy for denaturation was equal to 49.675 Kcal/Mole. The result of this experiment demonstrated that the enzyme is heat labile.
Keywords: Microsporum canis, Protease, purification, properties