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PURIFICATION AND CHARACTERIZATION OF RHODANESE FROM THE LEAVE OF BITTER MELON (*MOMORDICA CHARANTIA*)

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ABSTRACT

The *Mormodica charantia* leaves used in this work was obtained from Ile-Ife, Osun State. *Mormodica charantia* rhodanese was purified using 80% ammonium sulphate precipitation and affinity chromatography technique. The enzyme had a specific activity of 5.4 Rhodanese Unit per milligram of protein (RU/mg) with a purification fold of 2.42 and a percentage yield of 8.78%. The K_m of rhodanese from *Mormodica charantia* for sodium thiosulphate ($Na_2S_2O_3$) and potassium cyanide (KCN) were 16.67mM and 20mM respectively, while their V_{max} were 0.2RU/ml/min and 0.24RU/ml/min respectively. The substrate specificity showed that the enzyme was not inhibited by 2-mercaptoethanol, ammonium persulphate and sodium metabis- sulphite. The optimum temperature was 60°C at a pH of 7.0. The enzyme was not inhibited by salts (KCl, NaCl, $NiCl_2$, $MnCl_2$, $ZnCl_2$ and BaCl).

KEYWORDS: Rhodanese, *Mormodica charantia*, Properties, Sulphur Compounds