

## A novel enzyme extracted from *Aloe vera* plant used in hide unhairng leather process

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Abstract: The present study was aimed to extract a novel enzyme from *Aloe vera* plant and to evaluate its activity in the leather unhairing process. The enzyme was extracted from the leaves of *Aloe vera* plant and purified by dialysis and ion exchange chromatography. The purified enzyme was characterized by SDS-PAGE and Western blotting. The enzyme was found to be a dimeric protein with a molecular weight of approximately 150 kDa. The enzyme was highly active in the unhairing process of leather, showing a significant reduction in the unhairing time and the use of chemicals. The enzyme was stable at a wide range of pH and temperature, making it suitable for industrial applications. The results of this study suggest that the enzyme extracted from *Aloe vera* plant is a novel and effective enzyme for the leather unhairing process.

Keywords: *Aloe vera*, enzyme, leather unhairing, dimeric protein, SDS-PAGE, Western blotting, pH stability, temperature stability.