

Extraction and Characterization of Silky Hide Fibers of Wet Blue Leather

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Abstract: The silky leather fibers, which were extracted from chromium solid waste, has provided a new way in the high added-value conversion of leather solid waste. Hydrolyzed collagen was produced by most extraction methods and the appearances of them was solution states, but the structure of silky collagen fibers extracted from wet blue leather was little destroyed by dechroming appropriately with phosphoric acid via special loosening methods. The amount of dechroming and collagen hydrolysis degree were monitored spectrophotometrically, and the structures of the fiber were characterized using PM and SEM in the treating process, then the effect of dechroming amount on the fiber structures was investigated. The results showed that the amount of dechroming and the collagen hydrolysis improved with the increase of treatment temperature, the same as the offer of phosphoric acid. However, the reaction temperature has a greater impact on the fiber structure than the amount of phosphoric acid.

Key words: wet blue leather; silky hide fibers; extraction; characterization