

Supplementary Information for An Effective Method for Decellularization of Human Foreskin: Implications for Skin Regeneration in Small Wounds

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Fig.S1: Macroscopic appearance of native and FAM tissues. **A.** Native foreskin with a pink appearance and a fatty layer that was physically separated. **B.** FAMs after decellularization by the OFD-M have a white and soft appearance. **C.** FAMs after decellularization by the SDS-M exhibited a shrunken appearance. A representative picture of FAMs obtained by each of the two methods is presented. FAM; Foreskin acellular matrix, OFD-M; Optimized foreskin decellularization method, and SDS-M; Sodium dodecyl sulfate method.

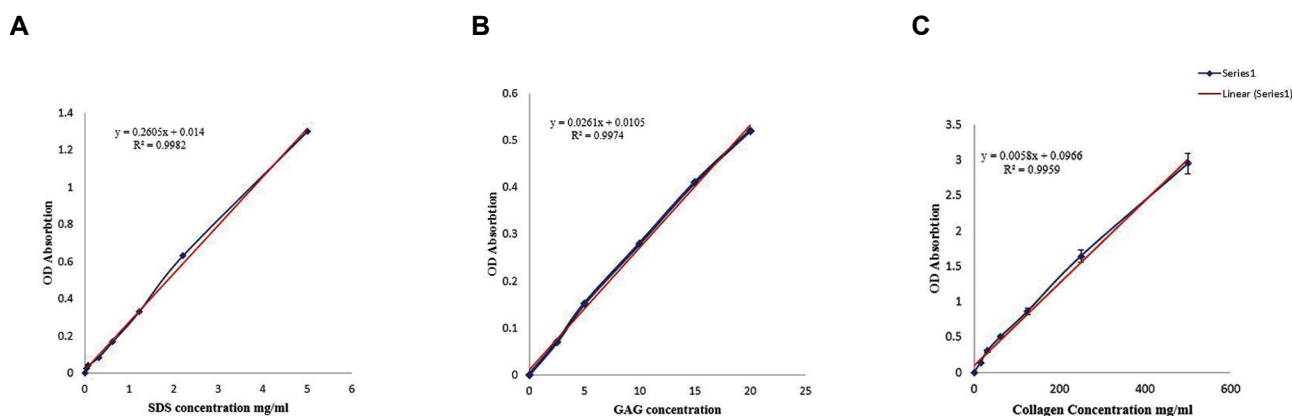


Fig.S2: The standard curves of SDS, GAG and collagen, used for measuring their respective concentrations in FAM tissues. **A.** The standard SDS curve obtained by measurement of absorption (OD) of each sample at 650 nm. **B.** The standard curve of GAG by measurement of absorption (OD) in 510-560 nm, and **C.** Standard curve of collagen by measurement of absorption (OD) in 540-560 nm. All curves were drawn by excel software 2013. SDS; Sodium dodecyl sulfate, GAG; Glycosaminoglycans, and FAM; Foreskin acellular matrix.

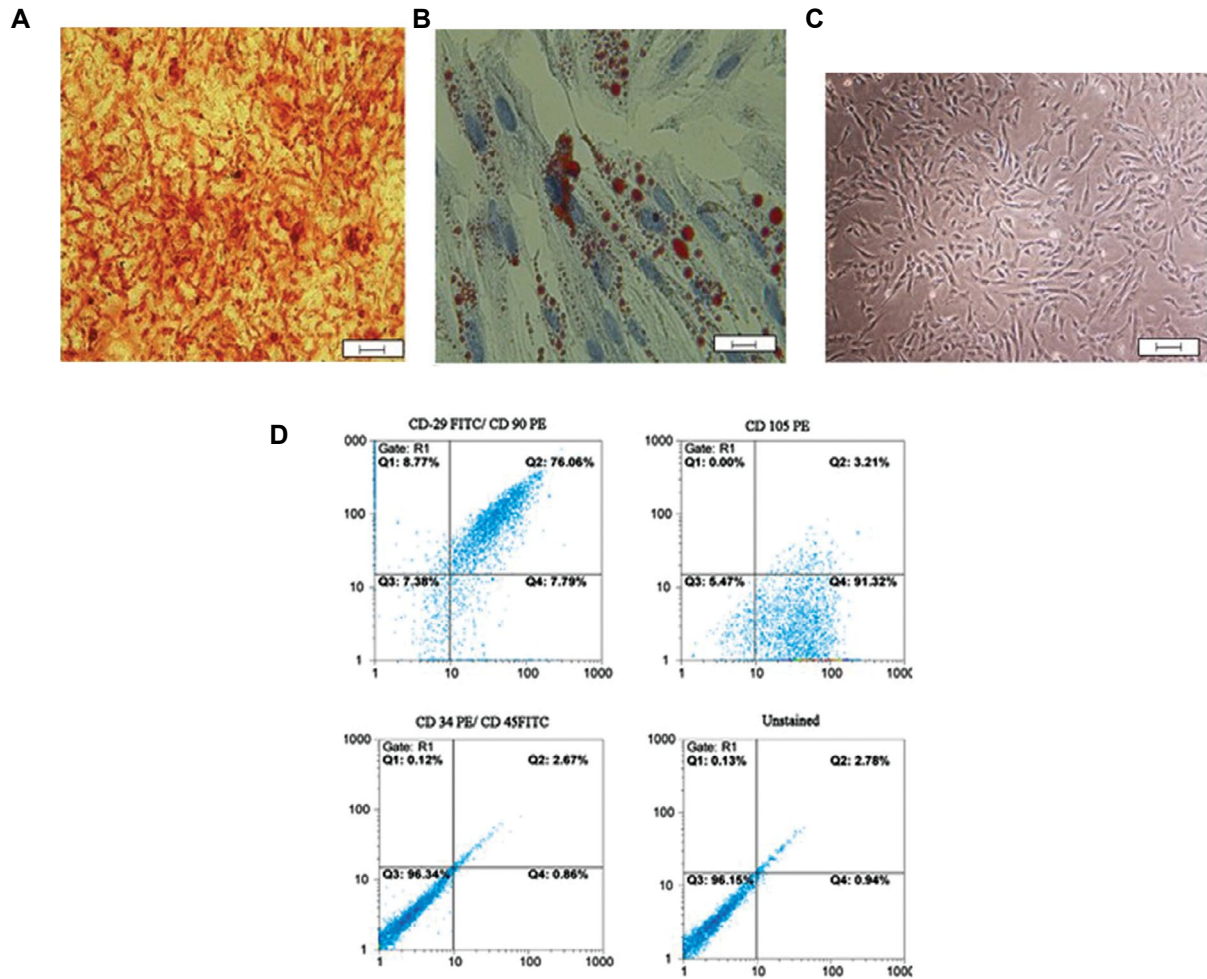


Fig.S3: Characterization of hucMSCs. **A.** Osteogenesis and **B.** Adipogenesis of hucMSCs were determined by Alizarin red staining and oil red staining, respectively (200x). **C.** hucMSCs show a fibroblast-like morphology (40x magnification). **D.** Flow cytometry results indicate that hucMSCs were uniformly negative for hematopoietic stem cell markers CD34 and CD45, and positive for MSC markers CD29, CD90, and CD105. hucMSCs; Human umbilical cord mesenchymal stem cells.

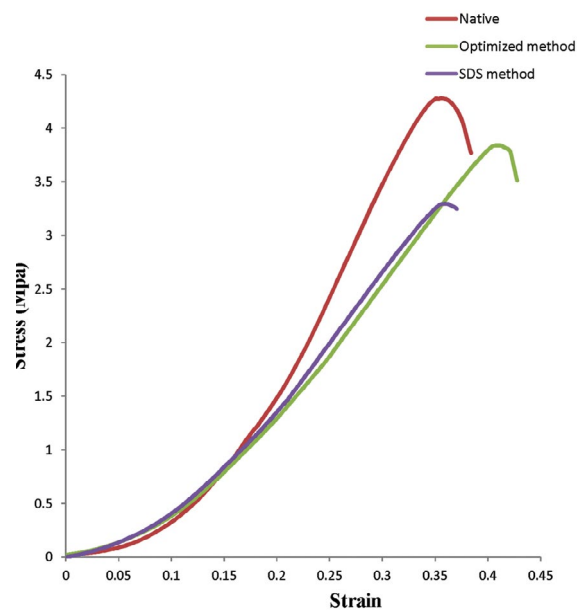


Fig.S4: Stress-time curves of the scaffolds. The native scaffold exhibited the greatest tensile strength (red line), followed by FAMs prepared by the OFD-M (green line), and finally by FAMs prepared by the SDS-M (blue line). The data were obtained from three independent experiments, and the pooled data of all experiments are shown. FAM; Foreskin acellular matrix, OFD-M; Optimized foreskin decellularization method, and SDS-M; Sodium dodecyl sulfate method.