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Abstract	:	Natural rubber skim latex is commonly discarded as waste or turned into skim natural rubber products such as skim crepe and skim blocks. It is challenging to retrieve all residual rubbers in skim latex since it has a very low rubber content and many non-rubber components like protein. Manufacturers conventionally utilize concentrated sulfuric acid as a coagulant. This method generates many effluents and hazardous pollutants that negatively impact the environment. This work presents an innovative method for enhancing the skim latex's value by employing an ultrafiltration membrane. This study aims to establish a hydrophilic PVDF-TiO2 mixed-matrix membrane. The skim latex was processed through a membrane-based ultrafiltration process, which yielded two products: skim latex concentrate and skim serum. Skim latex deposits that cause fouling on the membrane surface can be identified by SEM-EDX and FTIR analysis. The PVDF-PVP-TiO2 mixed-matrix membrane generated the maximum skim serum flux of 12.72 L/m2h in contrast to the PVDF pure membranes, which showed a lower flux of 8.14 L/m2h. CHNS analysis shows that a greater amount of nitrogen, which is indicative of the protein composition, was successfully extracted by the membrane separation process. These particles may adhere to the membrane surface during filtration, obstructing or decreasing the number of fluid flow channels. The deposition reduces the effective size of membrane pores, leading to a decline in flux rate...see more.