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Physicochemical and pharmaceutical properties of gelatin extracted from goat skin: The new excipient in pharmaceutical and food dosage form

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Generally the gelatin used in pharmaceutical and food dosage form was obtained from bovine and porcine. This research explored the new alternative source of gelatin, namely goat skin. Goat skin was soaked in hydrochlorid acid and then gelatin was extracted using warm water. Their physicochemical and pharmaceutical properties were investigated. A yield of 12.74 ± 0.87 g/100 g skin sample on the basis of wet weight was obtained. Organoleptic of goat gelatin powder is a vitreous, brittle solid faintly yellow in color, nearly tasteless and odorless. The result of physicochemical properties exhibited the following: sulfide content of 7.18 ± 0.68 ppm, lead, zinc and copper were not detected. % transmittance of goat gelatin solution revealed clarity value was 56.9 ± 0.95 . pH, moisture and ash content were 5.11 ± 0.9 , 9.23 ± 0.9 and 0.18 ± 0.16 , respectively. The results of pharmaceutical properties including emulsion activity index, foaming properties, gel strength and viscosity were 77.23 ± 23 , 118.87 ± 0.12 , 307.67 ± 2.64 and 25.5 ± 1.83 , respectively. The microbial assay showed microbes were not detected. All of these physicochemical and pharmaceutical properties of goat skin gelatin indicated that it meets the defined requirements of a good gelatin and could use as alternative material in pharmaceutical and food dosage form.

Biography

Zilhadia Anwar Hasibuan has completed his PhD from Faculty of Pharmacy University of Indonesia. She is a Lecturer and the Director of Pharmacy Medicine Laboratory Syarif Hidayatullah State Islamic University. She has published several papers in reputed journals and as presenter in several international conferences.

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