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(54) Title: IMPROVED METHOD FOR PRODUCING HIGHLY DIGESTIBLE HYDROLYZED KERATINACEOUS MATERIAL

(57) Abstract: The invention relates to a method for producing highly digestible, partly hydrolyzed keratinaceous material, preferably from feathers, hair, wool, hooves or nails, comprising the steps of (1) hydrolyzing keratinaceous material in the presence of water, in a hydrolyzer with heat and at a pressure between about 2 bar and about 100 bar to obtain a partly hydrolyzed keratinaceous material; (2) pre-drying the partly hydrolyzed keratinaceous material of step (1) to obtain a semi-dried partly hydrolyzed keratinaceous material having a solids content of about 50wt% or higher, preferably between 60-85wt%; and (3) concurrently drying and grinding the semi-dried partly hydrolyzed keratinaceous material of step (2) in an air turbulence mill, at about atmospheric pressure to obtain dried partly hydrolyzed keratinaceous material; wherein preferably steps (2) and (3) are carried out such that the drop in pepsin and/or ileal digestibility caused by steps (2) and (3) is less than 10%, and/or the pepsin and ileal digestibility of the dried partly hydrolyzed keratinaceous material is higher than respectively 75% and 80%; wherein the resultant dried partly hydrolyzed keratinaceous material comprises at least partly insoluble material, and wherein the average particle size of the dried partly hydrolyzed keratinaceous material (d50) leaving the air turbulence mill is between 20 µm and 0.7 mm and the d90 is below 1 mm as measured with laser diffraction using a dry powder Beckman Coulter particle size analyzer.



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