The samples of technical protein foaming agents based on keratin materials like wool were obtained by method of alkaline hydrolysis. The optimal parameters for the hydrolysis of keratin-containing raw materials were established: the duration of the process was 3 hours, the concentration of the NaOH reagent solution was 5%, the reaction temperature was 403K, the feedstock ratio was NaOH = 1:7.5. Conducted by IR-spectroscopic studies of the hydrolysis reaction products were shown the identity of the samples of keratin foaming agents, obtaining at 403K and at 433K. It is established that at a temperature above 403K the quality of the product of hydrolysis significantly not improve. Proposed structure of the samples has α-helical configuration of laying chain and samples of amino acids with peptide bonds. The samples obtained by hydrolysis of keratin materials are natural surfactants and after modification ther can used as foaming agents in fire fighting and foamers for construction.