

Investigation some characteristics of chicken feather's rachis

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ABSTRACT

In recent years, obtaining the natural protein fibers from chicken feathers, which are obtained as a by-product in the production of chicken meat and which cause environmental pollution and important part is waste, has been drawn to the perspective of scientists. So, the investigations about the chicken feather fibers reveal important properties of these fibers. Chicken feather fibers are obtained by mechanical cutting of the barbs which have fibrous structure, the structure branched from rachis and constitute the body of the feather. The rachis part of chicken feather constitutes approximately half of the weight of the feathers. So, it is necessary to examine the properties of the chicken feathers in order to gain their industrialization. This study is concerned with the mechanical and physical properties of the material that is taken as a by-product in the production of fibers from chicken feathers and constitutes the rachis part of the feathers.

INTRODUCTION

In recent years, the perspective of obtaining the natural protein fibers from chicken feathers which are obtained as a byproduct in the production of white meat and the important part is waste and causes environmental pollution, attracts the attention of scientists. Investigations on chicken feather fibers reveal important properties of these fibers [1]-[4]. Chicken feather fibers are obtained by mechanical cutting of barbs (fibrous structure), which are extended from rachis. But today, technology of fiber production from chicken feathers is not available. Such a technology is being developed at Erciyes University (Turkey). In the production of fibers from chicken feather with using special machine, the rachis part of feather is separated from this part of the barbs.

Chicken feather barbs constitutes approximately half of the weight of the feathers. This means that industrialization of chicken feathers should be considered about the part of the rachis. In this study, some properties of this material were examined.