

**CHICKEN FEATHER - STUDY OF PHYSICAL PROPERTIES OF TEXTILE FIBERS
FOR COMMERCIAL USE**

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ABSTRACT

More than 4 billion tons of chicken feathers are wasted yearly worldwide. As scientific and technological research is gathering each time more awareness about environmental problems, developing a sustainable solution for this situation becomes crucial. In order to find a commercial application of these otherwise wasted feathers, chicken feather has been studied by means of physical characterization. Mechanical tests such as elongation, elasticity and resistance (made by Instron dynamometer), determination of the content of moisture regain and fiber density, determination of medium title fibers and determination of the rate of retraction have been performed. The main finding from this present research was the identification of the potential for the production of textile yarn, non-woven and composite reinforcements, based on their mechanical properties.

KEYWORDS: Animal Textile Fiber, Physical Characterization, Chicken Feathers