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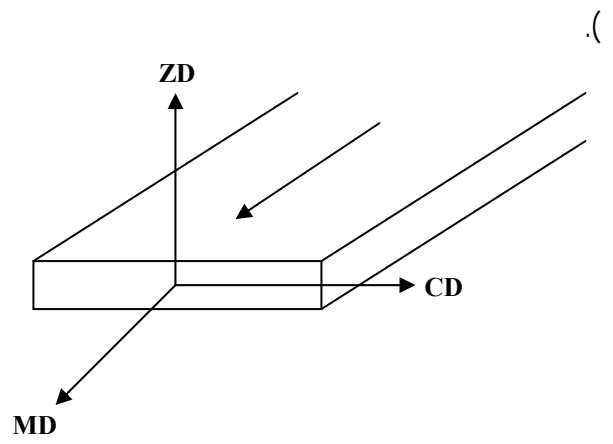
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(ZD)



Orthotropic
Machine direction
Cross machine direction

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(g/m ²)	(%)			
/ ± /	±	CMP		% +

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(MD)

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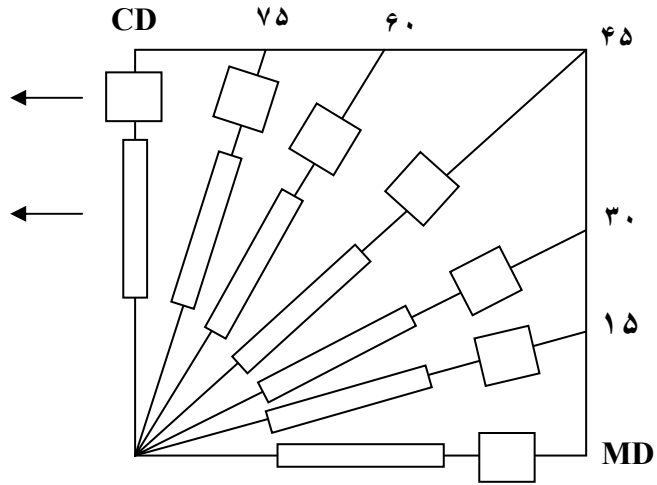
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TAPPI

T400 sp-97

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MOE_{CD} MOE_{MD}

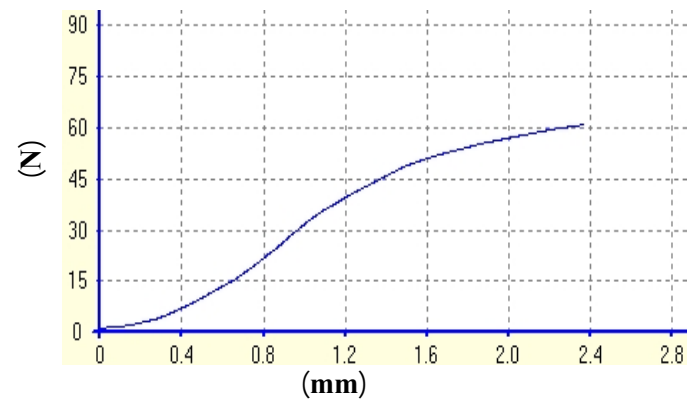
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T494 om - 96

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T414 om - 98

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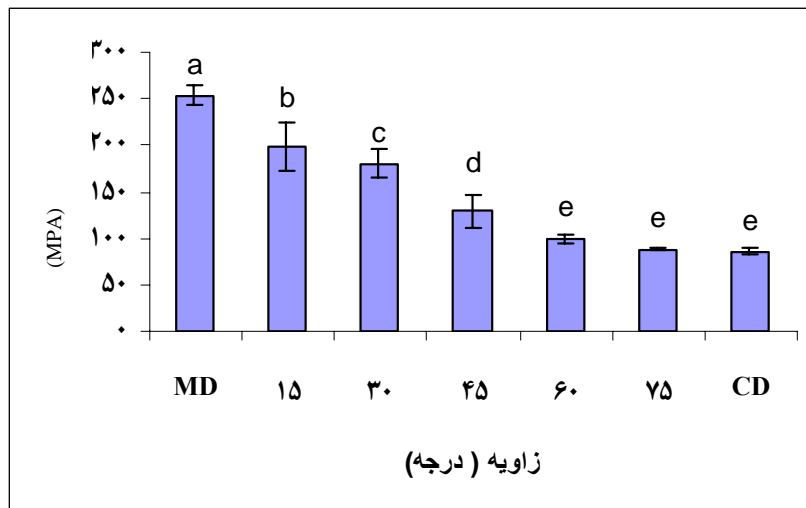
CD MD

CD MD

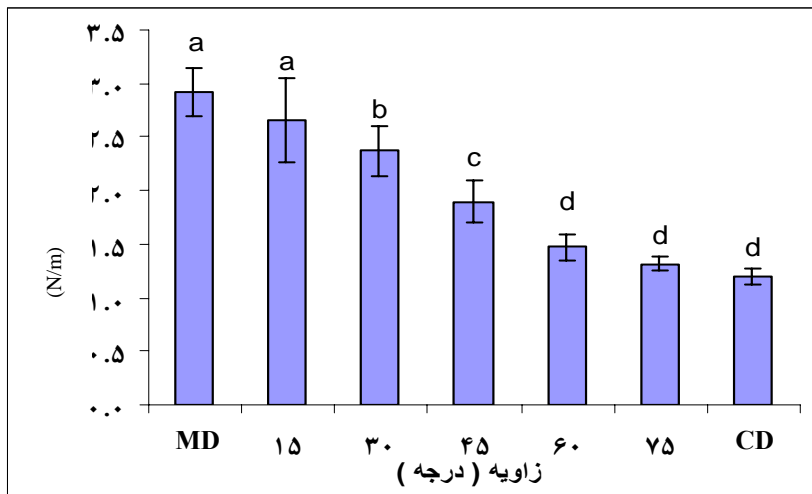
$$I = \text{MOE}_{\text{MD}} / \text{MOE}_{\text{CD}}$$

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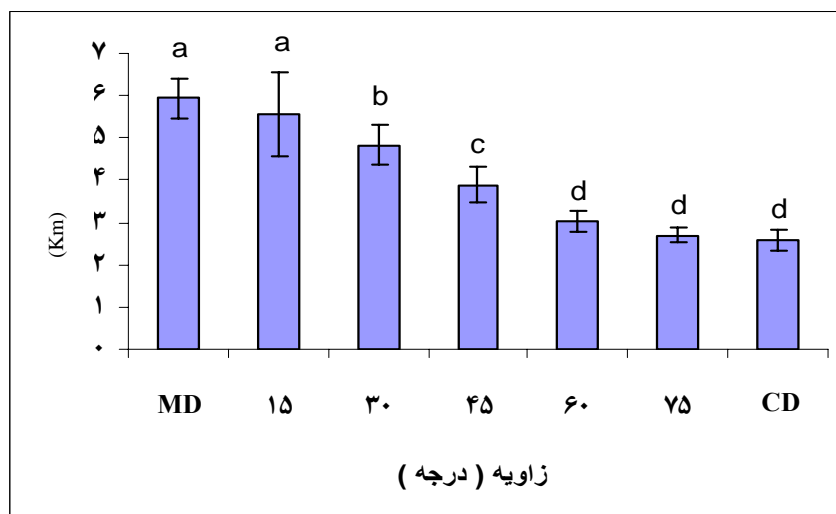
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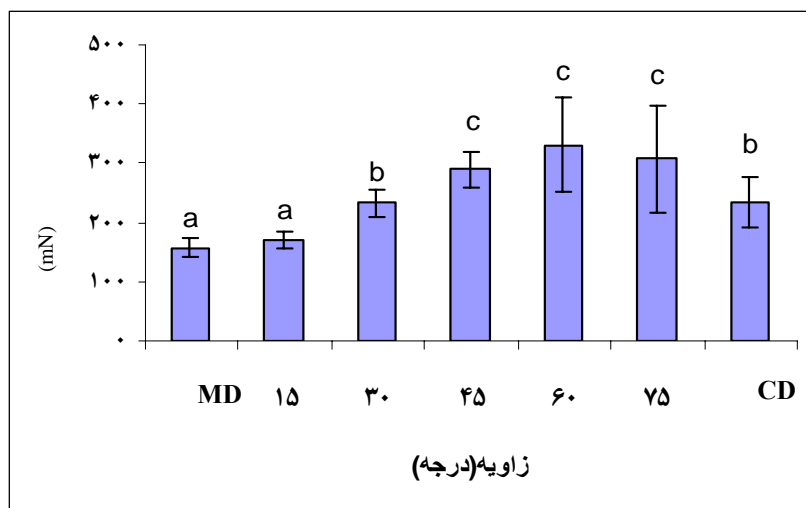
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Investigation on mechanical properties in different angles of newsprint paper

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Abstract

The anisotropic and mechanical properties of newsprint paper made in Iran were studied in this research. Tear and tensile strengths, modulus of elasticity and breaking length of newsprint were determined at different angles to machine direction (MD) and at an interval angle of 15° (15, 30, 45, 60, 75) and cross machine direction (CD). The results show that modulus of elasticity, tensile strengths and breaking length of newsprint paper are the highest in machine direction, decreasing with increase of angle and reach the lowest (half) in cross machine direction. There is no significant difference between mentioned properties from 60° to CD. Tear strength of newsprint paper was the lowest values in machine direction, increasing with increase of angle and reach highest (half) at of and then decreases up to CD.

Keywords: Newsprint paper, Mechanical properties, Modulus of elasticity, Anisotropy