

Figure 1.
Antioxidant activity of fresh fruits (I₅₀ mg)
mg sample necessary to 50% inhibition in colour of DPPH reagent

EFFECTS OF SOME EXTRUSION PARAMETERS ON THE HARDNESS OF EXTRUDED LENTILS

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The objective of this research was to study the effects of moisture content (18, 20, and 22%), and screw speed (100, 150, and 200 rpm) on the hardness of extruded lentils. The lentil semolina was extruded with a single screw extruder (Brabender 20 DN) at constant barrel temperature (160°C), screw compression ratio (2:1), and die diameter 4 mm. The hardness of the extrudates was measured with a TA.XT Plus Texture Analyser, Stable Micro Systems. The textural profiles of the extrudates showed that feed moisture had the highest effect on the hardness.

	Levels		
Moisture content (%)	18	20	22
Screw speed (rpm)	100	150	200

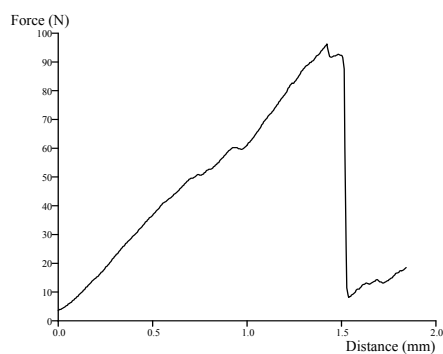


Figure. 1
Typical curve of extruded lentil tested
with TA.XT Plus Texture Analyser

$$F = -221,056 + 21,25W + 0,05n, \quad (N)$$

Where F – measured force, N; W – moisture content, %; n – screw speed, rpm.

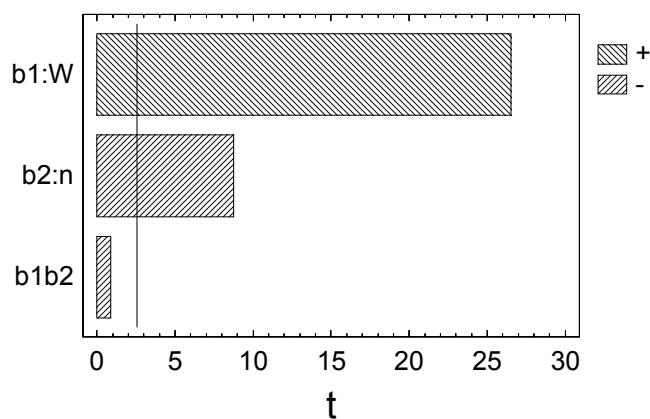
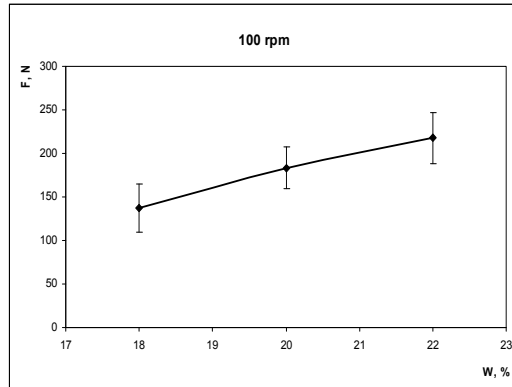
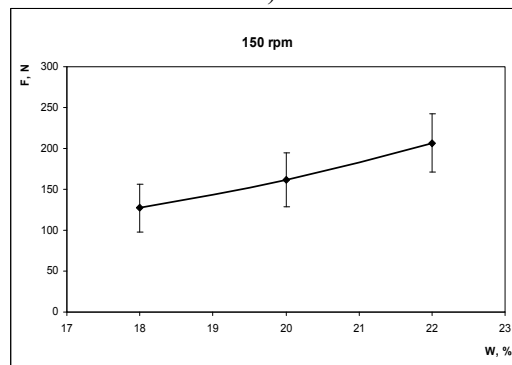


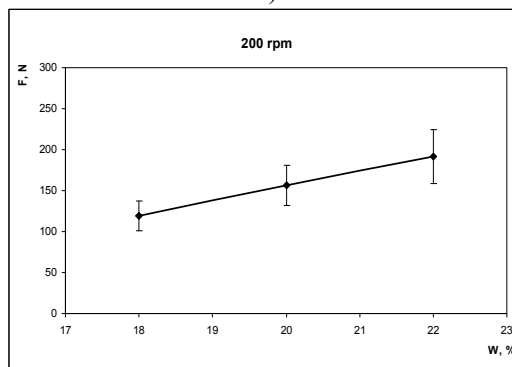
Figure2
Standardized estimated effects of regression model coefficients
on the hardness
(R-squared = 99.3619% Standard Error of Est. = 3.51347)



a)



b)



c)

Figure 3
Hardness vs. moisture content of extruded
lentil at various screw speeds