

## Effect of Thistle Ecotype in the Physical-Chemical and Sensorial Properties of Serra da Estrela Cheese

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**Abstract :** The objective of this study was to evaluate the physical and chemical characteristics of Serra da Estrela cheese and compare these results with those of the sensory analysis. For the study were taken six samples of Serra da Estrela cheese produced with 6 different ecotypes of thistle in a dairy situated in Penalva do Castelo. The chemical properties evaluated were moisture content, protein, fat, ash, chloride and pH; the physical properties studied were color and texture; and finally a sensory evaluation was undertaken. The results showed moisture varying in the range 40-48%, protein in the range 15-20%, fat between 41-45%, ash between 3.9-5.0% and chlorides varying from 1.2 to 3.0%. The pH varied from 4.8 to 5.4. The textural properties revealed that the crust hardness is relatively low (maximum 7.3 N), although greater than flesh firmness (maximum 1.7 N), and also that these cheeses are in fact soft paste type, with measurable stickiness and intense adhesiveness. The color analysis showed that the crust is relatively light ( $L^*$  over 50), and with a predominant yellow coloration ( $b^*$  around 20 or over) although with a slight greenish tone ( $a^*$  negative). The results of the sensory analysis did not show great variability for most of the attributes measured, although some differences were found in attributes such as crust thickness, crust uniformity, and creamy flesh.

**Keywords :** chemical composition, color, sensorial analysis, Serra da Estrela cheese, texture

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