



### P30. Physical-chemical and rheological characterization of tomato (*Solanum lycopersicum* L.) of Algarve

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#### ABSTRACT

The objective of this study was to evaluate the physico-chemical and rheological characteristics of two tomato varieties, Vimeiro and Runner, grown in Algarve - Portugal - in five case studies (A, B, C, D and E), during the harvest season. The samples were submitted to analysis: weight, caliber, moisture, total soluble solids, total titratable acidity, lycopene, color and hardness. When considering the factors producer X variety significant differences were observed for all parameters, excepted for color coordinates a\* and H° and hardness. For weight and caliber no differences were observed between varieties. Concerning Runner variety, the producer A achieved heavier and higher caliber tomatoes compared to producer E. For total soluble solids it was verified that producer C was the one that cultivated fruits with the highest concentration for both varieties and presented a higher total titratable acidity value. These results were more evident in the Vimeiro variety. For lycopene, the highest average value was found in fruits cultivated by producer A in the Vimeiro variety. The fruits that presented the highest luminosity (L\*) and higher mean values of b\*, in general, were the Vimeiro variety, led by producer A. It means that the fruits have more yellowish tones than the Runner variety. The Vimeiro variety, independently of the producer, also presented higher values of C\*, which means that the color of the fruits of this variety was stronger and brighter.

**KEYWORDS:** Tomato, Physical-chemical and rheological characterization, Runner, Vimeiro



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