P70: FATTY ACIDS AND RELATED NUTRITIONAL/HEALTHY INDEXES REGARDING SERRA DA ESTRELA CHEESE: GEOGRAPHICAL ORIGIN AND PRODUCTION DATE EFFECTS

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INTRODUCTION: Serra da Estrela (SE) is a traditional Portuguese cheese with a Protected Designation of Origin (PDO) certification. Although worldwide...
appreciated, consumers have perceived cheese as a food with a high fat content, rich in nutritionally controversial saturated fatty acids, which are usually related to the increase of blood plasma cholesterol concentration and for a growing incidence in coronary heart diseases.

**OBJECTIVES**: This study aimed to establish fatty acids (FA) profiles and related nutritional (ω-6:ω-3 ratio), desirable fatty acids contents and healthy indices (atherogenic and thrombogenic indices) of SE cheeses, and to evaluate the influence of cheese origin and production date.

**METHODOLOGY**: SE cheeses were acquired from 6 certified producers located in 5 municipalities (Celorico da Beira, Gouveia, Nelas, Oliveira do Hospital and Penalva do Castelo, and produced from Nov 2017 to March 2018. The FA profiles were established, by gas chromatography with a flame ionization detector, being extracted according to ISO 14156:2001. All statistical analysis was performed using the Subselect and MASS packages of the open source statistical R program.

**RESULTS**: The results showed that cheese origin differences arisen on the total contents of saturated, unsaturated and polyunsaturated FA (P-value<0.05, one-way ANOVA), whilst no such differences were found for the production date (P-value>0.05, one-way ANOVA). Cheese origin also significantly influenced nutritional and healthy indices, which was not so clear for the production date (Figure 1).

**FIGURE 1**

Nutritional and and healthy indexes of Serra da Estrela cheeses: geographical origin and production date effects