

PA193**Seed Physico-Chemical Characteristics of Coffee Clones Resistant to Rust in Raw and Toast Samples.**

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Rationale

Brazil is the main producer and exporter worldwide and the second largest coffee consumer of the world, showing a planting field of 2.311 million hectares. However, due to Coffee rust incidence caused by *Hemileia vastatrix* fungi, the brazilian production suffered loss, both in quantity and quality. The beverage quality is also directly influenced by the coffee roasting. This process is determined by the flavor and aroma, from precursors found in raw grain, represented by many chemical compounds. In this study aimed to characterize coffee clones seed resistant to rust by means physico-chemicals analysis of raw, whole and roasted sample until the midpoint.

Methods

Seeds from 12 clones of *Coffea arabica* L. (1- Pau Brasil MG1; 59 IPR, 101- Catuai amarelo 25L; 111 – Sacramento MG1; 112 - Catigua MG2; 116 - Tupi IAC 1669-33; 123 – Catigua MG3, 144 – Catuai vermelho; 217 – Obatã vermelho 1669, 308 – Acauã; 413 – Araponga MG1 and 421 IPR 103) were used to determinated moisture, ether extract, crude fiber, protein, fixed minerals, carbohydrates, phenolics compounds and total sugar. The results were analyzed and compared by the Scott Knott test at 5% probability.

Results

Significant differences were found for all variables. Reductions were observed after roasted coffee in crude fiber and total sugars. For the others variables, fixed minerals, crude protein, total lipids, carbohydrates and total polyphenol were noted a significant changes in the levels. All samples had levels of moisture and fixed minerals below the limit allowed in roasted coffee. Regarding the ether extract, the sample 112 got the lowest value (7.23%), being below the limit allowed according to the Ordinance N° 377, from April 26, 1999 of ANVISA.

Conclusions & Perspectives

In the obtained results, it was found that, coffee clones sample resistant to rust, despite the changes occurred after roasting, they presented physico-chemicals compounds levels within the standards recommended by the legislation in roasted coffee.