

PERFORMANCE IMPROVEMENT FOR AVOCADO OIL EXTRACTION

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A study on the performance improvement in the extraction of avocado oil (*Persea americana* Mill.) was carried out, with 2 enzymatic complexes and a mixture of both, as well as the effect on some physical, chemical and sensory characteristics of the oil. The pulp was enzymatically pre-treated with three complexes: Pectinex Ultra SP-L, Olivex, and a mixture of both, in three different concentrations. Then, the pulp was hydraulically pressed. The oil-aqueous mixture obtained was centrifuged to separate the oil. For the statistical analysis of extraction performance, a completely randomized experimental design with factorial arrangement 3x3 (3 enzymatic complexes and 3 concentrations) was conducted, with three replicates for each treatment. In order to statistically determine the best performance of the 9 enzymatic assays, ANOVA and Duncan's multiple range test were carried out. An extraction yield of about 80% was obtained with the mixture Pectinex Ultra SP-L/Olivex (1:1), as well as with Pectinex Ultra SP-L at the same concentration; meanwhile, extraction with Olivex reached only a 71% performance. The resulting oil contained: Iodine index (69.61 g I/100 g), saponification index (195.01 mg KOH g⁻¹), free fatty acid percentage (1.56%), peroxide value (19.58 meq Kg⁻¹), specific weight (0.915), refraction index at 25° C (1.4686), viscosity at 20° C (43 cP). The lipidic composition is mostly represented by oleic acid, (75.12%), followed by linoleic acid (8.76 %), and palmitic acid (8.61%). The sensory analysis indicates that it is a product of good quality because of its appearance, brightness, aroma and taste.