

EFFECT OF MATURATION STAGES AND PROCESSING ON THE QUALITY OF HASS AVOCADO OIL

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The oleaginous processing promotes changes in the chemical composition of edible oil which explains the importance of improving the raw material pretreatment and the extraction methods. The selected operational conditions can be pointed to the most profitable process or to which method is able to remove and preserve specific bioactive compounds present in the raw material. Therefore, the objective of this work was to evaluate the combined effect of different methods of drying and oil extraction on the acidity, oxidative stability and total unsaponifiable matter (UM) of oil from Hass avocado pulp. The fresh fruits, removed of peels and pits, were processed unripe and ripe. The pulp was dehydrated under convective air at 60 °C or in a microwave oven, followed by oil extraction by cold pressing. For comparison, the conventional method, using petroleum ether, was included for oil extraction. In conclusion, the ripening imparts a positive effect on the oxidative stability of avocado pulp oil, probably due the highest UM in the extracted oil (5.0 ± 1.1) as compared with unripe avocado oil (3.4 ± 0.28). Additionally, the lipid oxidation strongly depends on the drying method. Microwave drying followed by cold pressing provided an oil with the lowest acidity (0.21 ± 0.02 % of oleic acid) and the highest oxidative stability (20.8 ± 1.6 hours) and UM content (6.2 ± 1.4 %). Regarding the petroleum ether extraction the same quality indices were, respectively, $0.62 \pm 0.01\%$, 9.5 ± 0.52 hours and 4.1 ± 0.43 %.