

8th International Conference on

FOOD SAFETY, QUALITY & POLICY

November 27-28, 2017 Dubai, UAE

Physical and chemical characteristics of olive oils from Sétif and Khenchela

Benabid H Gueddou and W Kellil A

Constantine 1 University, Algeria

Virgin olive oil obtained from olives is extracted by various methods in thermal conditions that do not lead to alterations in the oil and which have not undergone any treatment other than washing, decantation, centrifugation and filtration. In Algeria, production of olive oil in the companion 2015 reached 60,000 tons and occupies the 8th place in the world, distributed over several provinces of the country, including Setif and Khenchela. The present work aims to evaluate the physical and chemical characteristics of olive oils from Sétif and Khenchela and extracted by two different methods. Olive oil samples are collected at regional olive trituration units equipped with traditional and industrial trituration systems (continuous three-phase). They are placed directly in well-closed and labeled bottles (date of collection, region, fruit type, extraction method) before being placed in the dark and at the cool until the analysis. The results showed that olive oils have acidity percentages ranging from 0.39% to 6.36%, peroxides indices which are between 10.2 and 15.43 mEq O₂/kg, saponification index from 186.88 to 204.05 and iodine value and ester variables. The percentages of impurities were 0.18% to 1.25%. As for the contents of carotenoids, they range from 2.69 to 11.80. Refractions indexes are almost stable for all our samples. The absorbance in the ultraviolet at 232 nm and 270 nm reveal coefficients extinctions ranging from 0.113 to 2.530 and 0.113 to 0.853 respectively. The fusion point varies from 2.25 °C to 4.75 °C, while the smoke (fume) and whatever the extraction system, the results are non-standard. All density values indicate compliance of our oils to the standard set by the Codex stan33, (1981). Our olive oils are characterized by a number of top yellow units to the number of red units.

benabid_al@yahoo.fr

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