

**P62: MONITORING THE LOSS OF FRESHNESS OF THE PDO AGOURELEO CHALKIDIKIS  
VIRGIN OLIVE OIL UPON STORAGE IN THE DARK USING CHROMATOGRAPHIC,  
SPECTROSCOPIC AND ORGANOLEPTIC MEANS**

Mastralexi A.<sup>1)</sup>, Nenadis N.<sup>1)</sup>, Tsimidou M. Z.<sup>1)\*</sup>

<sup>1)</sup> Aristotle University of Thessaloniki, School of Chemistry, Laboratory of Food Chemistry and Technology (LFCT),  
54124, Thessaloniki (Greece) – [tsimidou@chem.auth.gr](mailto:tsimidou@chem.auth.gr); [niknen@chem.auth.gr](mailto:niknen@chem.auth.gr); [amastral@chem.auth.gr](mailto:amastral@chem.auth.gr)

The shelf-life of any PDO virgin olive oil is 12 months maximum. The PDO “Agoureleo Chalkidikis” was recently approved (21-6-13) and it is important to collect as much as possible information about its chemical composition that defines its storability and loss of freshness over this period. In the present study three samples from the above PDO product were collected directly from olive mills that bottle and export this PDO and stored in the dark for up to 12 months. Every 6 months the oils were examined for changes in the legal parameters (peroxide values, acidity, K values), changes in the total hydroxytyrosol and tyrosol content which is important to support a health claim and changes related to tocopherol content and chlorophylls that are directly related to virgin olive oil freshness. Monitoring was accomplished using classical wet chemistry methods, UV-Vis spectroscopy, FT-IR spectroscopy and reversed/normal-phase HPLC. Sensory evaluation was carried out according to the COI procedure by an expert panel. The results indicate that loss of desirable sensory characteristics and/or bioactive ingredients can happen before the 12 months so that the freshness of a PDO product cannot be always guaranteed in the end of the 12 months.