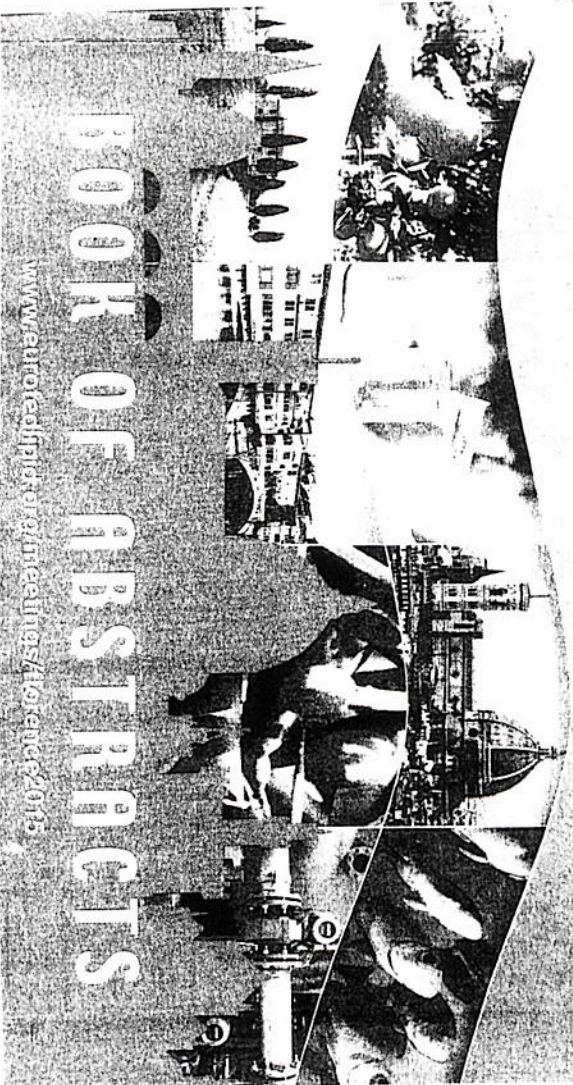


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Ethyl Esters of Extra Virgin Olive Oils produced in Central Portugal

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Fatty acids methyl and ethyl esters (FAME and FAEE) may be good indicators of the quality of olives and of the oils produced from these fruits, as methanol and ethanol are formed during fermentation of olives. In turn, waxes are more readily extracted from the soft skin of overripe olives. These compounds are evaluated simultaneously based on EU Regulations. Since 1 of March 2014, the European Union established the limit of 40 mg/kg of ethyl esters for the extra virgin olive oil (EVOO) category; following the recommendations of International Olive Oil Council (IOOC) in 2015/16 the limits for FAEE are 30 mg/kg (Reg (UE) N° 1348/2013, 16 December).

In the present work olive oils extracted from Portuguese cultivars of Beira Baixa, Central Portugal, were analyzed for their alkyl esters and wax composition, for two successive harvest years 2012 and 2013. Three olive oils extracted from Beira Baixa cultivars (Galega Vulgar, Cordovil de Castelo Branco and Bical de C. Branco) and from four other cultivars (Cobrançosa, Arbequina, Carrasquenha and Frantoio) were evaluated. The olive oils were extracted by a laboratory Abencor system or by industrial mills. All olive oils showed wax content (C42+C44+C46) lower than 40 mg kg⁻¹, although the oils extracted in Abencor system had lower values than the ones obtained in industrial mills. The FAEE contents were lower than 9 mg kg⁻¹ for EVOO obtained in the laboratory Abencor system, but virgin olive oil from industrial mills showed values up to 52 mg kg⁻¹. The influence of ripening stage is also discussed.