Influence of Extraction Systems on Oxidative Stability of Turkish Sari Ulak Olive Oils

Dilşat Bozdogan Konuskan[1], Abidin Tatlı[2]

[1]Mustafa Kemal University, Department of Food Engineering, Hatay, Turkey [2]Plant Protection Research Institute, Adana, Turkey

In this study, it was investigated the effects of three different extraction systems on oxidative stability of virgin olive oil obtained from Sarı Ulak olive variety growing inside Tarsus region in Turkey. The free acidity (% oleic), peroxide value (meq/kg), *p*-anisidine value (*p*-AV) and thermal oxidative stability test were carried out in virgin olive oils extracted by cold press (laboratory conditions by using two-phase batch equipment), solvent and three-phase centrifugation systems. Free acidity and initial peroxide values were ranged 0.85-1.62 % oleic acid and 6.53-10.48 meq/kg in olive oils, respectively. The lowest and highest free aciditiy and peroxide values were found in olive oils obtained through cold press system and solvent extraction systems, respectively. Initial *p*-anisidine values in olive oils was found as 0.08-0.25 *p*-AV. Alterations in peroxide values and *p*-anisidine value were determined as 212.53-327.65 % and 458.28-2234.26 %, olive oils obtained from cold press and solvent extraction systems, respectively. The results showed that free acidity, peroxide value, *p*-anisidine value and oxidative stability had significant differences.between extraction systems. Under the light of data gathered, it can be inferred from the alteration in peroxide values and p-anisidine value results of oxidative stability minimum changed in olive oil obtained from cold pres methods.